Patricia M. French Senior Attorney



300 Friberg Parkway Westborough, Massachusetts 01581 (508) 836-7394 (508) 836-7039 (facsimile) pfrench@nisource.com

August 19, 2005

BY OVERNIGHT DELIVERY AND E-FILE

Mary L. Cottrell, Secretary Department of Telecommunications and Energy One South Station Boston, MA 02110

Re: <u>Bay State Gas Company</u>, D.T.E. 05-27

Dear Ms. Cottrell:

Enclosed for filing, on behalf of Bay State Gas Company ("Bay State"), please find Bay State's response to the following Record Request:

From the AG:

DD AC 04	DD ACCOO	DD AC 01	DD AC 02
RR-AG-84	RR-AG-90	RR-AG-91	RR-AG-93

RR-AG-99

From the Department:

RR-DTE-40	RR-DTE-138	RR-DTE-148	RR-DTE-152

RR-DTE-154 RR-DTE-159

Please do not hesitate to telephone me with any questions whatsoever.

Very truly yours,

Patricia M. French

cc: Per Ground Rules Memorandum issued June 13, 2005:

Paul E. Osborne, Assistant Director – Rates and Rev. Requirements Div. (1 copy) A. John Sullivan, Rates and Rev. Requirements Div. (4 copies) Andreas Thanos, Assistant Director, Gas Division (1 copy) Alexander Cochis, Assistant Attorney General (4 copies) Service List (1 electronic copy)

RESPONSE OF BAY STATE GAS COMPANY TO THE THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E. D. T. E. 05-27

Date: August 19, 2005

Responsible: Danny G. Cote, General Manager

RR-AG-084: Identify the formal name of the detailed cost description report that was

submitted with List No. 15 under DTE-3-25.

Response: The report provided for List No. 15 in DTE-3-25 has no formal name. The

report was an EXCEL pivot table file produced from the Lawson General Ledger number 290 report ("GL290"). The GL290 report was re-formatted in an EXCEL pivot table to present the data on a yearly basis. The GL290

Detail reports, for all projects listed in DTE-3-25, are provided in

Attachment RR-DTE-135 (b).

RESPONSE OF BAY STATE GAS COMPANY TO RECORD REQUESTS FROM THE ATTORNEY GENERAL D.T.E. 05-27

Date: August 19, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

RR-AG-090: In Exhibit BSG/JES-1 Workpaper JES-6, provide a schedule indicating

the amount charged to Bay State Massachusetts for all cost items on

Page 27 of the U-1360 form.

Response: Attachment RR-AG-90 provides a schedule indicating the amount

charged to Bay State by cost category. Please note that the total amount shown differs by the amount shown on Exhibit BSG/JES-6 for amounts

capitalized and recorded below the line by Bay State.

ANNUAL REPORT OF NISOURCE CORPORATE SERVICES COMPANY, INC. For the Year Ended December 31, 2004

Schedule XVI ANALYSIS OF CHARGES FOR SERVICE ASSOCIATE AND NONASSOCIATE COMPANIES

			TOTAL A	ASSOCIATE C CHARGES	OMPANY	В	AY STATE G	AS
Ln.		DESCRIPTION OF ITEMS	DIRECT	INDIRECT		DIRECT	INDIRECT	
No.			COST	COST	TOTAL	COST	COST	TOTAL
			\$000	\$000	\$000	\$000	\$000	\$000
1	920	Salaries and Wages	90,082	33,841	123,923	8,508	3,355	11,863
2	921	Office Supplies and Expenses Administrative Expenses Transferred -	11,292	2,844	14,136	1,091	282	1,373
3	922	Credit	251	(713)	(462)	(39)	(71)	(110)
4	923	Outside Services Employed	49,248	1,288	50,536	2,999	124	3,123
5	924	Property Insurance	-	83	83	-	8	8
6	925	Injuries and Damages	1,850	209	2,059	112	21	133
7	926	Employee Pensions and Benefits	949	28,955	29,904	115	2,870	2,985
8	928	Regulatory Commission Expense	-	-	-	-	-	-
9	930.1	General Advertising Expenses	250	26	276	26	3	29
10	930.2	Miscellaneous General Expense	2,782	269	3,051	264	25	289
11	931	Rents	9,693	13,047	22,740	910	1,393	2,303
12	932	Maintenance of Structure and Equipment	12,709	1,783	14,492	1,104	177	1,281
13	403	Depreciation and Amortization Expense	6,663	500	7,163	445	50	495
14	408	Taxes Other Than Income Taxes	83	9,131	9,214	7	906	913
15	409	Income Taxes	-	(563)	(563)	-	(87)	(87)
16	410	Provision for Deferred Income Taxes	-	1,086	1,086	-	109	109
		Provision for Deferred Income Taxes -		,	•			
17	411	Credit	-	(1,298)	(1,298)	-	(113)	(113)
18	419	Other Interest	-	(7)	(7)	-	(1)	(1)
19	421	Gain/Loss on Sale of Property	-	-	-	-	-	-
20	426.1	Donations	68	-	68	9	-	9
21	426.5	Other Deductions	2	4	6	-	-	-
22	427	Interest on Long-Term Debt	-	-	-	-	-	-
23	431	Other Interest Expense	18	561	579	1	57	58
24 25 26 27 28	Instruc	tions: Total cost of service will equal the amount billed to associate and nonassociate companies under their separate analysis of billing schedules.						
29		Total Expenses	185,940	91,046	276,986	15,552	9,108	24,660
30	430	Interest on Short-Term Debt			1,013			101
31 32		Compensation for Use of Capital- Associated	Companies					
33	430	Intercompany Interest on Indebtedness	Companies		1,800			179
34	430	' '			1,000			179
35		Compensation for Use of Equity Capital Total Cost of Service			279,799			24,940
55		TOTAL COST OF DETVICE			210,100			27,370

RESPONSE OF BAY STATE GAS COMPANY TO RECORD REQUESTS FROM THE ATTORNEY GENERAL D.T.E. 05-27

Date: August 19, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

RR-AG-091: In Exhibit BSG/JES-1 Workpaper JES-6, Page 27, Item 931, of the 2003

U-13-60 form provide information to justify any change associated with the way the service company accounted for or allocated its rent expense

between 2003 and 2004.

Response: In 2003 NCSC billed Inter-Company rent expense to the affiliates based

on square footage by department and how each department had historically allocated its time (previous 6 months). Under this allocation method most of the rent expense showed up as a direct cost item within

the U-13-60.

In 2004, NCSC began billing its rent expense to the affiliates based on square footage by department and how each department billed its labor for the during the current month. NCSC believes a rent allocation based on current month charges instead of historical allocations ensures the affiliates are billed in a more accurate manner.

This small change in the allocation methodology resulted in a shift from direct to indirect presentation for the U-13-60. Please note that the total rent expense was quite similar for the two years; \$21,162,000 for 2003 and \$22,740,000 for 2004.

RESPONSE OF BAY STATE GAS COMPANY TO RECORD REQUESTS FROM THE ATTORNEY GENERAL D.T.E. 05-27

Date: August 19, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

RR-AG-093: Regarding Exhibit AG-10, "accumulated late charges", remove all late

fees and late charges from the cost of service.

Response: Table RR-AG-093 below sets forth the accumulated late charges

contained in Exhibit AG-10 and the cost of service.

TABLE RR-AG-093

Accumulated Late Charges AG-10

		Cross
	Accumulated	Reference
<u>Month</u>	Late Charges	Code
	\$	
Feb. 04	2,687.18	A-14-1
Mar. 04	2,687.18	A-15-1
Apr. 04	2,687.18	A-16-1
May 04	2,687.18	A-17-1
Jun. 04	2,687.18	A-18-1
Jul. 04	2,687.18	A-19-1
Sep. 04	2,687.18	A-21-1
Nov. 04	2,687.18	A-23-4
	_,001.10	
Dec. 04	587.52	A-24-1
Total	<u>22,084.96</u>	

RESPONSE OF BAY STATE GAS COMPANY TO RECORD REQUESTS FROM THE ATTORNEY GENERAL D.T.E. 05-27

Date: August 19, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

RR-AG-99: Provide the itemization of expenses allocated to Bay State Gas for

outside services recorded in Account No. 923 for the NiSource

Chairman/CEO (\$1.293 million).

Response: Table RR-AG-99 below itemizes the portion of expense allocated to Bay

State Gas for outside services recorded in Account NO. 923, for Nisource

Chairman/CEO.

Table RR-AG-99

<u>Item</u>	Amount \$
Legal – General Counsel Retainer	57,383
O/S – Consulting	44,272
O/S – Other	8,066
Total	109,721

RESPONSE OF BAY STATE GAS COMPANY TO RECORD REQUESTS FROM THE D.T.E. D.T.E. 05-27

Date: August 19, 2005

Responsible: John Skirtich, Consultant (Revenue Requirements)

RR-DTE-40: Provide an example of non-discretionary plant that is revenue producing.

Response: The witness is unaware of a situation where a plant addition can be both

non-discretionary and revenue producing.

RESPONSE OF BAY STATE GAS COMPANY TO THE THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E. D. T. E. 05-27

Date: August 19, 2005

Responsible: Danny G. Cote, General Manager

RR-DTE-138: Regarding response to DTE-3-21, List No. 4, explain the discrepancy in the original costs shown in DTE-3-21 revised and the original costs shown in DTE-3-21.

Response:

Please see Attachment RR-DTE-138 (a), page1, for a reconciliation of the direct costs reported in DTE-3-21 (Original), page 2, reflecting cost through 12/31/04 and DTE-3-21 Revised, page 3, which reflects cost through 6/26/05. The net change in costs of (\$91,611.99) was attributed to additional charges - after 12/31/04 - of \$31,798.43 and an offset / credit for reimbursement work performed for (\$123,410.42). The Massachusetts Highway Department reimbursed the Company \$123,410.42. The amount was credited on 2/28/05 to work order numbers 552430 and 5727669 for \$115,580.03 and \$7,830.39, respectively. Please see Attachment RR-DTE-138 (b) for copies of the work order cost detail reports for work order 552430 and 5727669. The reimbursement amount credited to work order 552430 has been circled and is on page 5 of Attachment RR-DTE-138 (b). The reimbursement amount credited to work order 5727669 has been circled and is on page 10 of Attachment RR-DTE-138 (b).

Main Work Output Summary

List No. 4

Project:

B04D5054

Location:

Franklin / West Central Street

[1]	-	[2]	*****	[3]
DTE-3-21		DTE-3-21 REVISED		
(Cost through 12/31/04)		(Cost through 6/26/05)		

Main Work	Direct	Direct	(Change in
Output #	Cost	Cost	<u>D</u>	irect Cost
150	\$ ••	\$ 	\$	-
151	\$ -	\$ -	\$	-
170	\$ 18,087.86	\$ 6,221.99	\$	(11,865.87)
171	\$ 115,580.03	\$ 35,833.91	\$	(79,746.12)
Total	\$ 133 667 89	\$ 42 055 90	\$	(91.611.99)

Reconcilable Items

Reimbursements	\$ (123,410.42) '1/
Additional Charges - after 12/31/04	\$ 31,798.43
Change in Direct Cost	\$ (91,611.99)

^{1/} The Massachusetts Highway Department / The Commonwealth of Massachusetts Reimbursed Bay State Gas \$123,410.42. The amount was credited on 2/28/05 to to work order numbers 5524530 and 5727669 for \$115,580.03 and \$7,830.39, respectively.

Bay State Gas Company D T.E. 05-27 Attachment DTE-3-21 REVISED Page 43 of 775

List No. 4

Includes Cost Through 12/31/04

Project: Location B04D5054 Franklin / West Central Street

Main Work Output #		irect Cost	O.	verhead Cost		Total Cost
150	S	-	5		\$	
151		-		•		
170	4	8,087.86		4,962.44		23,050.30
171	11	5,580.03		18,811.22		134,391.25
Total	5 13	3 667 89	S	23.773.66	. 5	157,441.55

Bay State Gas Company D.T.E. 05-27 Attachment DTE-3-21 REVISED Page 41 of 775

List No. 4

Includes Cost Through 6/26/05

Project: Location B04D5054

Franklin / West Central Street

Main Work Output #		Direct Cost	(Overhead Cost	Total <u>Cost</u>
150	\$	-	\$	_	\$ -
151		-		**	f + -
170		6,221.99	•	5,118.51	11,340.50
1 71		35,833.91		34,690.96	 70,524.87
Total	 %	42.055.90	<u> </u>	39.809.47	\$ 81,865.37

ATTACHMENT RR-DTE-138 (b)

Work Order Cost Detail Reports for WO # 5524530 & # 5727669 With Cost Activity through 6/26/05

REPORT PARAMETERS

Report Type : Detail
Order# : 5524530

Division : Brockton
Work Type : Distribution
Work Code : (All)
Comp/Cont : (All)
Project ID : 0000
Source Code : (All)
From Period : 200301
To Period : 200507

Program: wwrpt130.p Date: 08/07/2005 Req By: Doug Casey

d

Continued on next page...

Bay State Gas Company Work Order Management System Work Order Cost Detail

Program: wwrpt130.p Date: 08/07/2005 Reg By: Doug Casey

ect Id: B04D5054 Work Code: MRMIC Output#: 0171

Work Code: MRMIC Output	4	
Work Code	Stat: 99 07/31/2004	
	9	
Order#: 5524530 Task: 001 Project Id: B04D5054	Stat:	
Id:		
Project	a.l	
001	Centr	
Task:	anklin/	
5524530	Town/Street: Franklin/Central	
Order#:	Town/St	

•									
TVD	ר מפיז דרו מפיז	# 4004	Acct	Source	Reference.	Vendor/Description	Cost Cat	Units	Cost
7471		: !	i f :	 					
Д	03/31/04	2014140000	01115	ΡW	176	PAYROLL EXPENSE	6002	5.56	167.30
J	03/31/04	2014140000	01115	ЪW	159	PAYROLL EXPENSE	6002	5.56	167.30
μĴ	03/31/04	2014140000	01115	РW	159	PAYROLL EXPENSE	6005	0.14	6.27
ы	04/30/04	2014140000	01115	Мď	159	PAYROLL EXPENSE	6002	7.96	239.52
H	04/30/04	2014140000	01115	ЪW	159	PAYROLL EXPENSE	6005	2.29	103.29
ᅠᅼ	04/30/04	2014140000	01115	Жd	159	PAYROLL EXPENSE	6008	00.00	4.28
ы	04/30/04	2014140000	01115	PK	159	PAYROLL EXPENSE	6002	9.60	288.86
ŭ	04/30/04	2014140000	01115	PW	159	PAYROLL EXPENSE	6005	6.00	270.81
J	04/30/04	2014140000	01115	Wd	159	PAYROLL EXPENSE	6008	00.00	12.90
.7	04/30/04	2014140000	01115	ЬW	159	PAYROLL EXPENSE	6002	9.60	288.86
i "II	04/30/04	2014140000	01115	ЪW	159	PAYROLL EXPENSE	6005	6.00	270.81
H	04/30/04	2014140000	01115	PW	159	PAYROLL EXPENSE	6009	00.00	12.90
μ }	06/30/04	2014140000	01115	PW	159	PAYROLL EXPENSE	6002	8,96	269.61
₽	06/30/04	2014140000	01115	Мd	159	PAYROLL EXPENSE	6005	1.26	56.87
Д	06/30/04	2014140000	01115	Wd	159	PAYROLL EXPENSE	6005	5.60	252.76
1	06/30/04	2014140000	01115	Md	159	PAYROLL EXPENSE	6005	3.64	219.06
H	06/30/04	2014140000	01115	ЬW	159	PAYROLL EXPENSE	6008	00.00	18.06
⊷ ⊒	06/30/04	2014140000	01115	Md	1090	PAYROLL EXPENSE	6002	6.29	177.07
Į.,	06/30/04	2014140000	01115	፠ፙ	159	PAYROLL EXPENSE	6002	4.70	141.54
H	06/30/04	2014140000	01115	Μď	1090	PAYROLL EXPENSE	6005	6.68	470.34
ᆏ	06/30/04	2014140000	01115	Μd	1090	PAYROLL EXPENSE	6005	18.08	1,018.15
H	06/30/04	2014140000	01115	Md	1090	PAYROLL EXPENSE	6005	12.18	514.61
ı	06/30/04	2014140000	01115	ΡW	159	PAYROLL EXPENSE	6005	13.52	813.87
ы	06/30/04	2014140000	01115	Мd	159	PAYROLL EXPENSE	6005	11.76	530.79
н	06/30/04	2014140000	01115	Мď	159	PAYROLL EXPENSE	6008	00.00	69.53
ьì	06/30/04	2014140000	01115	ΡW	1090	PAYROLL EXPENSE	6008	00.00	84.50
ы	06/30/04	2014140000	01115	ЬW	159	PAYROLL EXPENSE	6002	17.24	518.75
П	06/30/04	2014140000	01115	Md	159	PAYROLL EXPENSE	6005	2.16	129.69
,1	06/30/04	2014140000	01115	Μď	159	PAYROLL EXPENSE	6005	8.62	389.06
ы	06/30/04	2014140000	01115	Md	159	PAYROLL EXPENSE	6008	00.0	37.07
μì	07/31/04	2014140000	01115	Mď	159	PAYROLL EXPENSE	6002	11.84	356.27
	07/31/04	2014140000	01115	Md	159	PAYROLL EXPENSE	6005	0.22	8.91
ы	07/31/04	2014140000	01115	Wd	159	PAYROLL EXPENSE	6005	2.81	169.23
'n	07/31/04	2014140000	01115	Md	159	PAYROLL EXPENSE	6005	5.92	267.20
ц	07/31/04	2014140000	01115	ЬW	159		6008	00.0	15.91
Ţ	07/31/04	2014140000	01115	ЬW	159		6002	1.32	39.72
H	07/31/04	2014140000	01115	ЬW	953		6002	8.00	225.28
1	07/31/04	2014140000	01115	ЬW	1224		6002	3.48	98.00
H	07/31/04	2014140000	01115	ΡW	596		6002	5.06	134.44
ı	07/31/04	2014140000	01115	ЫĶ	353		6002	8.88	267.20
7	07/31/04	2014140000	01115	PW	813		6002	3,65	102.73
ы	07/31/04	2014140000	01115	PW	596		6005	0.16	10.50
ы	07/31/04	2014140000	01115	ЬW	813		6005	0.46	32.10
'n	07/31/04	2014140000	01115	ЬW	353		6005	1.89	113.56
ᆸ	07/31/04	2014140000	01115	Þ₩	813	PAYROLL EXPENSE	6005		6.42
Ļ	07/31/04	2014140000	01115	ЪW	1224		6005	2.39	101.06
, -	07/31/04	2014140000	01115	ΡW	953		6005	4.00	168.96
ы	07/31/04	2014140000	01115	Ма	813	PAYROLL EXPENSE	6005	16.0	39.52

	Cost	4.01	202.02	32.45	14.82	24.70	90,86	50.0 80.0	6.40	6.42	4.20	9.88	14.03	8.58	10.75	6,79	10 164 83	0	2,816.00	3,847.47	3,785.37	3,485.22	1,891.96	2,749.44	1,701.44	20.35.00	1,820.60	1,080,00	2,632.58	2,937.24	2,316.00	2,316.00	4,434,14 0 806 20	2.316.00	2,364.76	1,905.00	2,667.00	1,905.00	1,905.00	980,	1,905.00	1,905.00	1,909,00	3,2,2,5	103 00	385.00	292.60	292.60		
	Units	90.0	4.44	0.79	0.34	0.57	77.7	77.0	0.00	0.11	0.08	0.23	00.00	00.00	00.00	0.00	00.00		00.00	00.00	0.00	0.00	0.00	0.00	00.00	00.0	00.0	00.00	00.00	00.00	00.00	0.00	0.00	00.0	00.00	00.00	00.0	00.00	00.00	00.0	00.00	0.00	00.0	00.0	000	00.0	00.00	0.00		
nny System iil	Cost Cat	6005	6005	6005	6005	6005	6005	8003	9009	8005 8005	6009	6005	6008	6008	6008	6008	8009		1609	1609	1609	1609	1609	1609	1609	6000	1609	1609	1609	1609	1609	1609	1609	F 60 4 C	1609	1609	1609	1609	1609	1609	1609	1609	1609	1000	F007	3606	1606	1606		
Bay State Gas Company Work Order Management System Work Order Cost Detail	Vendor/Description	PAYROLL EXPENSE	-						PAIROLL BARBASE				PAYROLL EXPENSE	PAYROLL EXPENSE			PAYROLL EXPENSE	TOCAL LABOR		. UTILITY	. UTILITY	. UTILITY	. UTILITY	. UTILITY	1359IN.E. UTILITY CONSTRUC	. Ultriii	1359IN E HTTLITY CONSTRUC	DIVISION		UTILITY	. UTILITY	. UTILITY	. UTILITY	1359IN.E. UILLITY CONSTRUC	. UTILITY	. UTILITY	13591N.E. UTILITY CONSTRUC		. UTILITY	. UTILITY	. UTILITY	. UTILITY	OTILITY	. UTILITY	LASSEN.E. OTILITY CONSTRUCT	N C E	972FRANKLIN TOWN TREASOR	NMOL)	
		1 124	ш	ш	j.i.	D4 I	LLL F	ing a	A, [ц	4 4.24	1.24	щ	щ	114	124			00	00	00	00	00	00	00))	3 8	2 6	00	00	00	00	00	0 0	000	00	00	00	00	00	00	00	00	00	000	000	0 0	2 0	2	
	Reference	813	353	596	813	813	596	80 in	E C C	0 00 0 00	10 E	813	1224	813	953	596	33		G4498101	G4498102	G4498103	G4498104	G4498105	G4498106	G4498107	64498108	G4498109	107959	G4498111	G4498112	G4498113	G4498114	G4498115	G4498116	G4498119	G4498120	G4498121	G4498122	G4498123	G4498124	G4498125	G4498126	G4498127	G4498117	G5106022	61704	61704	#0/T9	# 0 1	
	Acct Source Unit Code	00 01115 PW	100 01115 PW	01115	01115	01115	01115	01115	OO OIIIS PW	31110	01115	01115	00 01115 PW	00 01115 PW	00 01115 PW	01115	100 01115 PW		00 01260 AD	00 01260 AD	01260	01260	01260	01260	01260	01260	000 01260 AD	01140	01260	01260	01260	01260	01260		01260	01260	01260	01260	01260	01260	01260	01260	01260	01260	01260	01115	01115	000 01115 AD	2 1 1 2	
0.p 005 sey	Acct #	20141400	2014140000	20141400	20141400	20141400	20141400	20141400	20141400	20141400	20141400	20141400	20141400	20141400	20141400	20141400	20141400		2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000	2014140000		2014140000	Da 6	
Program: wwrpt130.p Date: 08/07/2005 Req By: Doug Casey	e Tran Dt	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04	07/31/04		04/29/04	05/04/04	05/04/04	05/06/04	05/06/04	05/06/04	05/06/04	05/13/04	05/13/04	05/13/04	06/29/04	06/29/04	06/29/04	06/29/04	06/29/04	06/29/04	06/29/04	07/01/04	07/01/04	07/01/04	07/01/04	07/01/04	07/01/04	07/01/04	07/01/04	07/06/04	07/15/04	07/31/04	07/31/04	07/31/04	E 07/31/04 Continued on next	
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04/02/04 2011110000 01115 IS 264659 6 IN WELD ELROW 2007 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		04/02/04	2014140000		SI	264059		P FITTING	2209	00.00	1,342.50
04/02/04 2011410000 01115 15 244659 6 130 DB LIA WRILE PIEROW 2000 0.00		04/02/04	2014140000		SH	264059			2207	00.0	29.16
2014140000 01115 15		04/02/04	2014140000		IS	264059		ILD ELBOW	2207	00.00	189.91
2014140000 01115 S. 264699 G. 10 WELD END BALL VALVE 2209 0.00 2014140000 01115 S. 286169 G. OZ CAN TEPLON PRSTE 2209 0.00 2014140000 01115 S. 286169 G. OZ CAN TEPLON PRSTE 2209 0.00 2014140000 01140 S. 271696 F. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01140 S. 271696 G. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01140 S. 271696 G. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01140 S. 271696 G. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01140 S. 271696 G. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01140 S. 271696 G. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01140 S. 271696 G. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01140 S. 271696 G. VEY'S 35MLL TAPECOAT H35 GREY 2209 0.00 2014140000 01115 S. 272068 G. IN WELD END BALL VALVE 2207 0.00 2014140000 01115 S. 272068 G. IN WELD END BALL VALVE 2207 0.00 2014140000 01115 S. 272068 G. IN WELD END BALL VALVE 2207 0.00 2014140000 01115 S. 272068 G. IN WELD END BALL VALVE 2207 0.00 2014140000 01115 S. 272068 G. IN WELD END BALL VALVE 2207 0.00 2014140000 01115 S. 272068 G. IN WELD END BALL VALVE 2207 0.00 2014140000 01115 S. 272068 G. IN WELD END BALL VALVE 2207 0.00 2014140000 01115 S. STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4001 0.00 2014140000 0114 MS MS STORES CLEARING 0552453001 4002 0.00 2014140000 0114 MS MS STOR		04/02/04	2014140000		SI	264059	6.625 OD .250 WALL	, STEEL PIPE	2206	00.00	5,279.18
2014140000 01115 S. 286169 4'YY5' 35ML TAPPCOAT H35 GREY 2209 0.00 2014140000 01140 S. 271731 6.525 OD .290 MALL STREEL PIPE 2207 0.00 2014140000 01140 S. 271750 6.525 OD .290 MALL STREEL PIPE 2208 0.00 2014140000 01140 S. 271750 6.525 OD .290 MALL STREEL PIPE 2208 0.00 2014140000 01140 S. 271750 6.525 OD .290 MALL STREEL PIPE 2208 0.00 2014140000 01140 S. 271750 6.525 OD .290 MALL STREEL PIPE 2208 0.00 2014140000 01140 S. 271750 6.525 OD .290 MALL STREEL PIPE 2209 0.00 2014140000 01140 S. 271750 6.10 MELD PER DELL VALVE 2209 0.00 2014140000 01140 S. 271750 6.10 MELD PER DELL VALVE 2207 0.00 2014140000 01140 S. 27266 S. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. 27266 G. IN WELD PER DELL VALVE 2207 0.00 2014140000 0115 S. STORES CLEARING 0.0524530001 4002 0.00 2014140000 0114 MS MS STORES CLEARING 0.0524530001 4002 0.00 2014140000 0114 MS MS STORES CLEARING 0.0524530001 4002 0.00 2014140000 0114 MS MS STORES CLEARING 0.0524530001 4002 0.00 2014140000 0114 MS MS STORES CLEARING 0.00		04/02/04	2014140000		SI	264059	6 IN WELD END BALL	, VALVE	2209	00.00	997.50
2014140000 01140 IS		04/14/04	2014140000			286169	4"X75' 35MIL TAPEC	OAT H35 GREY	2209	00.0	310.82
2014140000 01140 IS 271596 4"XF5' SBML TAPECATH H3 GREY 2209 0.00 0214140000 01140 IS 271596 4"XF5' SBML TAPECATH H3 GREY 2209 0.00 0.00 14140000 01140 IS 271596 6.635 0D 250 WALL STEEL PIPE 2206 0.00 0.00 14140000 01140 IS 271750 6.635 0D 250 WALL STEEL PIPE 2206 0.00 0.00 14140000 01140 IS 271750 6.635 0D 250 WALL STEEL PIPE 2206 0.00 0.00 14140000 01140 IS 271750 6.18 WALD END BALL VALVE 2209 0.00 0.00 14140000 01140 IS 271750 6.18 WALD END BALL VALVE 2209 0.00 0.00 14140000 01140 IS 271696 6.1N WALD END BALL VALVE 2209 0.00 0.00 0.00 0115 IS 272068 6.1N WALD END BALL VALVE 2209 0.00 0.00 0.00 0115 IS 272068 6.1N WALD END BALL VALVE 2209 0.00 0.00 0.00 0115 IS 272068 6.1N WALD END BALL VALVE 2207 0.00 0.00 0.00 0.00 0.00 0.00 0.00		04/14/04	2014140000	01115	SH	286169	16 OZ CAN TEFLON P	ASTE	2209	00.0	43.40
2014140000 01140 IS 271696 4*X75' 35MLI, TAPECOAT H35 GREY 2209 0.00 2014140000 01140 IS 271596 6.625 OD .280 WALL STEEL PIPE 2206 0.00 2014140000 01140 IS 271750 6.625 OD .280 WALL STEEL PIPE 2206 0.00 2014140000 01140 IS 271750 6.625 OD .280 WALL STEEL PIPE 2209 0.00 2014140000 01140 IS 271750 6.625 OD .280 WALL STEEL PIPE 2209 0.00 2014140000 01140 IS 271750 6.035 OD .280 WALL STEEL PIPE 2207 0.00 2014140000 01140 IS 271750 6.035 OD .280 WALL STEEL PIPE 2207 0.00 2014140000 01145 IS 272068 6.1N WELD END BALL VALVE 2207 0.00 2014140000 0115 IS 272068 6.1N WELD END BALL VALVE 2207 0.00 2014140000 0115 IS 272068 6.1N WELD END BALL VALVE 2207 0.00 2014140000 0115 IS 272068 6.1N WELD END BALL VALVE 2207 0.00 2014140000 0114 II IL NOW PROD LABOR 4013 0.00 2014140000 01AL MS MS STORES CLEARING 0.0524530001 4001 0.00 2014140000 01AL MS MS STORES CLEARING 0.0524530001 4001 0.00 2014140000 01AL MS MS STORES CLEARING 0.00		06/03/04	2014140000		SI	271721	6 IN WELD CAP		2207	00.0	19.70
2014440000 01140 IS 271566 5"UTA ABS PLASTIC ROADMAY BOX 2209 0.00 1.00		06/07/04	2014140000		SI	271696	4"X75' 35MIL TAPEC	CAT H35 GREY	2209	00.00	616.42
201440000 01140 IS 271750 6.625 OD .250 WALL STEEL PIPE 2206 0.00 1		06/07/04	2014140000		SI	271696	5"DIA.ABS PLASTIC	ROADWAY BOX	2209	00.00	35.18
201440000 01140 IS 271756 6.625 OD .280 WALL STREEL PIPE 2205 0.00 0.00 0.00 0.00 0.00 0.00 0.00		06/07/04	2014140000		IS	271750	6.625 OD .250 WALL	STEEL PIPE	2206	00.0	3,458.70
2014140000 01140 IS 271796 6 IN WELD END BALL VALVE 2209 0.00 2014140000 01140 IS 271696 6 IN WELD TEB BALL VALVE 2207 0.00 2014140000 01140 IS 272686 6 IN 90 DEG. IR WELD ELBOW 2207 0.00 2014140000 01115 IS 27268 6 IN 45 DEG. IR WELD ELBOW 2207 0.00 2014140000 0115 IS 27268 2 "X 3" H17490 NRILLING NIPPLE 2207 0.00 2014140000 0115 IS 27268 2 "X 3" H17490 NRILLING NIPPLE 2207 0.00 2014140000 0114 II IL INDIRECT LABOR 4013 0.00 2014140000 01AL NT NT NON PROD LABOR 4014 0.00 2014140000 01AL MS MS STORES CLEARING 4002 0.00 2014140000 01AL MS MS STORES CLEARING 4002 0.00 2014140000 01AL MS MS STORES CLEARING 4002 0.00 2014140000 01AL MS MS <t< td=""><td></td><td>06/01/04</td><td>2014140000</td><td></td><td>SI</td><td>271750</td><td>6.625 OD .280 WALL</td><td>STEEL</td><td>2206</td><td>00.0</td><td>1,267.25</td></t<>		06/01/04	2014140000		SI	271750	6.625 OD .280 WALL	STEEL	2206	00.0	1,267.25
2014140000 01140 IS 271696 6 IN WELD TEE 2207 0.00 1.00		06/07/04	2014140000		SI	271796		, VALVE	2209	00.0	498.75
2014140000 01140 IS 271696 6 IN WELD END BALL VALVE 2207 0.00 1.00		06/07/04	2014140000		SI	271696			2207	00.0	24.90
2014140000 01115 IS 272068 6 IN 90 DEG. LR WELD ELBOW 2207 0.00		120	2014140000		IS	271696		. VALVE	2209	00.0	1,496.25
2014140000 01115 IS 272068 2"X 3" H17430 DRILLING NIPPLE 2207 0.00 2014140000 01115 IS 272068 6 IN 45 DEG. LR WELD ELBON 2.077 0.00 2014140000 01AL PR FRINGE BENEFITS 4007 0.00 15. 2014140000 01AL NT NT NON PROD LABOR 4013 0.00 2014140000 01AL NT NT VCHICLE CLEARING 4007 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS MS STORES CLEARING 4002 0.00 2014140000 01AL MS MS STORES CLEARING 4002 0.00 2014140000		06/14/04	2014140000		IS	272068		ILD ELBOW	2207	00.00	21.68
2014140000 01115 IS 272068 6 IN 45 DEG. IR WELD ELBOW 2207 0.00 15,		06/14/04	2014140000		SI	272068	2"X 3" H17490 DRIL	TING NIPPLE	2207	00.00	30.26
**TOCASI MATERIALS 0.00 15. 2014140000 01AL FR FR FR FRINGE BENEFITS 4007 0.00 0.00 0.00 0.00 0.00 0.00 0.00		06/14/04	2014140000		IS	272068	6 IN 45 DEG. LR WE	ILD ELBOW	2207	00.0	20.01
2014140000 01AL FR FR FRINGE BENEFITS 4007 0.00 2014140000 01AL IL IL INDIRECT LABOR 4013 0.00 2014140000 01AL NT NT NON PROD LABOR 4014 0.00 2014140000 01AL NC VC VEHICLE CLEARING 4001 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL FR FRINGE BENEFITS 4002 0.00 2014140000 01AL FR FRINGE BENEFITS 4002 0.00 2014140000 01AL FR FRINGE BENEFITS 4002 0.00 2014140000 01AL MS STORES CLEARING 0.00							**Total	MATERIALS			15,681.57
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10		#0/CT/CO	2014140000		<u> </u>	4 1	THE CHARLES		- 6.00	00.0	2000
2014140000 Olal. NT NT NEHICLE CLEARING 4001 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING 4013 0.00 2014140000 01AL MS STORES CLEARING 4013 0.00 2014140000 01AL MT NT NON PROD LABOR 4013 0.00 2014140000 01AL MS STORES CLEARING 0.00 0.00			2014140000		7 1	7 9	TOTAL TOTAL NON) ·	9 0) v
2014140000 OLAL MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS STORES CLEARING 4002 0.00 2014140000 0.1AL MT NON PRIOLE CLEARING 4002 0.00 2014140000 0.1AL MT NOT VEHICLE CLEARING 4002 0.00 2014140000 0.1AL MS STORES CLEARI			2014140000		H C	IN.	Ç	100000000000000000000000000000000000000	# CO F	00.0	# C P & C F
2014140000 0.1AL MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS MS STORES CLEARING 4002 0.00 2014140000 0.1AL FR FR FRINGE BENEFITS 4002 0.00 2014140000 0.1AL NT NNT NNDHECT LEARING 4002 0.00 2014140000 0.1AL MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS STORES CLEARING 4002 0.00 2014140000 0.1AL MS STORES CLEARIN		03/31/04	2014140000) (<	، ر : <	9	***********	1000	0 0	21.027
2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL FR FRINGE BENETTS 4007 0.00 2014140000 01AL IL IL IL NV VC VEHICLE CLEARING 4001 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 <		04/05/04	2014140000		S E	n (E	STOKES CLEAKING		4002	00.0	26.402
2014140000 01AL MS STORES CLEARING 4002 0.00 1, 2014140000 01AL MS STORES CLEARING 4002 0.00 1, 2014140000 01AL MS STORES CLEARING 4002 0.00 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 0.00 2014140000 01AL FR FR FRINGE BENETTS 4002 0.00 1, 2014140000 01AL FR FR NON PROD LABOR 4013 0.00 1, 2014140000 01AL MS STORES CLEARING 0.00 0.00 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS <t< td=""><td></td><td></td><td>2014140000</td><td></td><td>M.S.</td><td>ZC.</td><td></td><td></td><td>4004 4004</td><td>0.00</td><td>27.0</td></t<>			2014140000		M.S.	ZC.			4004 4004	0.00	27.0
2014140000 01AL MS STORES CLEARING 4002 0.00 1, 2014140000 01AL MS STORES CLEARING 4002 0.00 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 0.00 2014140000 01AL FR FR FRINGE BENEFITS 4002 0.00 1, 2014140000 01AL IL IL IL IL MON PROD LABOR 4013 0.00 1, 2014140000 01AL NT NT NON PROD LABOR 4014 0.00 0.00 2014140000 01AL MS STORES CLEARING 0.00 0.00 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 0.00 2014140000 01AL MS NS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING		04/02/04	2014140000		MS	MS			4002	00.0	. a
2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL FR FRINGE BRIEFITS 4007 0.00 2014140000 01AL TL INDIRECT LABOR 4013 0.00 2014140000 01AL NT NON PROD LABOR 4014 0.00 2014140000 01AL NC VC VEHICLE CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARIN		04/02/04	2014140000		MS	MS			4002	00.00	1,108.62
2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL FR FRINGE BENEFITS 4013 0.00 2014140000 01AL IL INDIRECT LABOR 4014 0.00 2014140000 01AL NT NON PROD LABOR 4014 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING 0.			2014140000		MS	MS			4002	00.00	209.47
2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL FR FRINGE BENEFITS 4007 0.00 1, 2014140000 01AL IL IL NT NOPHICLE CLEARING 4013 0.00 2014140000 01AL MS STORES CLEARING 0.05524530001 4001 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING 0.00 0.00		04/14/04	2014140000		MS	MS			4002	00.00	65.27
2014140000 01AL FR FR FRINGE BENEFITS 4007 0.00 1, 2014140000 01AL IL IL IL INDIRECT LABOR 4013 0.00 1, 2014140000 01AL NT NT NT VENICLE CLEARING 4014 0.00 2014140000 01AL MS STORES CLEARING 4002 0.00 2014140000 01AL MS STORES CLEARING 0.00 0.00 2014140000 01AL MS STORES CLEARING 0.00 0.00 2014140000 01AL MS STORES CLEARING 0.00		04/14/04	2014140000		MS	MS			4002	00.0	9.11
2014140000 Olal IL IL IL INDIRECT LABOR 4013 0.00 2014140000 Olal NT NNV PROD LABOR 4014 0.00 2014140000 Olal MS STORES CLEARING 4002 0.00 <td></td> <td>04/15/04</td> <td>2014140000</td> <td></td> <td>FR</td> <td>FR</td> <td>FRINGE BENEFITS</td> <td></td> <td>4007</td> <td>00.00</td> <td>1,066.81</td>		04/15/04	2014140000		FR	FR	FRINGE BENEFITS		4007	00.00	1,066.81
2014140000 01AL NT NT NON PROD LABOR 4014 0.00 2014140000 01AL VC VC VC VC VC VC 0.00 2014140000 01AL MS MS STORES CLEARING 4002 0.00		04/20/04	2014140000		II	IL	INDIRECT LABOR		4013	00.00	892.07
2014140000 OlAL WC VC VC VC VCHICLE CLEARING 005524530001 4001 0.00 2014140000 0lAL MS STORES CLEARING 4002 0.00		04/25/04	2014140000		LN	LN	NON PROD LABOR		4014	00.00	110.36
2014140000 01AL MS MS STORES CLEARING 4002 0.00 12 2014140000 01AL MS MS STORES CLEARING 4002 0.00 12 2014140000 01AL MS MS STORES CLEARING 4002 0.00 72 2014140000 01AL MS MS STORES CLEARING 4002 0.00 26 2014140000 01AL MS MS STORES CLEARING 4002 0.00 16 2014140000 01AL MS MS STORES CLEARING 4002 0.00 16 2014140000 01AL MS MS STORES CLEARING 4002 0.00 31 2014140000 01AL MS MS STORES CLEARING 4002 0.00 31		04/30/04	2014140000		VC	VC	VEHICLE CLEARING	005524530001	4001	00.0	222.24
2014140000 01AL MS STORES CLEARING 4002 0.00 12 2014140000 01AL MS STORES CLEARING 4002 0.00 72 2014140000 01AL MS STORES CLEARING 4002 0.00 72 2014140000 01AL MS MS STORES CLEARING 0.00 26 2014140000 01AL MS MS STORES CLEARING 0.00 10 2014140000 01AL MS MS STORES CLEARING 4002 0.00 10 2014140000 01AL MS MS STORES CLEARING 4002 0.00 31		06/03/04	2014140000		MS	MS	STORES CLEARING		4002	00.00	4.13
2014140000 01AL MS STORES CLEARING 4002 0.00 72 2014140000 01AL MS MS STORES CLEARING 4002 0.00 26 2014140000 01AL MS MS STORES CLEARING 4002 0.00 26 2014140000 01AL MS MS STORES CLEARING 4002 0.00 10 2014140000 01AL MS MS STORES CLEARING 4002 0.00 31 2014140000 01AL MS MS STORES CLEARING 4002 0.00 31		06/07/04	2014140000		MS	MS	STORES CLEARING		4002	00.00	129.44
2014140000 01AL MS STORES CLEARING 4002 0.00 72 2014140000 01AL MS STORES CLEARING 4002 0.00 26 2014140000 01AL MS STORES CLEARING 4002 0.00 10 2014140000 01AL MS STORES CLEARING 4002 0.00 10 2014140000 01AL MS STORES CLEARING 4002 0.00 31		06/07/04	2014140000		WS	W.			4002	00.00	7.38
2014140000 01AL MS STORES CLEARING 4002 0.00 26 2014140000 01AL MS STORES CLEARING 4002 0.00 10 2014140000 01AL MS STORES CLEARING 4002 0.00 10 2014140000 01AL MS STORES CLEARING 4002 0.00 31		06/07/04	2014140000		MS	ωs			4002	00.00	726.32
2014140000 01AL MS STORES CLEARING 4002 0.00 10 2014140000 01AL MS MS STORES CLEARING 4002 0.00 2014140000 01AL MS MS STORES CLEARING 4002 0.00 31		06/07/04	2014140000		WS	MS			4002	00.00	266.12
2014140000 01AL MS STORES CLEARING 4002 0.00 31		06/07/04	2014140000		S W	W.S			4002	00.00	104.73
2014140000 01AL MS MS STORES CLEARING 4002 0.00 31		06/07/04	2011110000	TA LO	ž Ž) (/) E			4002	00.00	5.22
		*0/10/00	00000111100		. Z	0 W			4002	00.0	314.21
		#n//n/on	20141400		0.20	5)		1

	bay State Gas Company Work Order Management System Work Order Cost Detail
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Program: wwrptl30.p Date: 08/07/2005 Reg By: Doug Casey

*		•	4	SOLITION					
Хре	Type Tran Dt	Acct #	Unit	Code	Reference	Vendor/Description	Cost Cat	Units	s Cost
1	1 1 1 2 4 4 4 4 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1	1 1 1	F		1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	
	06/14/04	2014140000	OIAL	MS	MS	STORES CLEARING	4002	00.00	0 4.55
	06/14/04	2014140000	OIAL	SM	MS	STORES CLEARING	4002	00.00	0 6.35
	06/14/04	2014140000	OLAL	S	MS	STORES CLEARING	4002	00.00	0 4.20
	06/15/04	2014140000 (OIAL	Я	FR	FRINGE BENEFITS	4007	00.00	0 2,193.48
	06/15/04	2014140000	OIAL	ц.	FR	FRINGE BENEFITS	4007	00.00	0 4,431.66
	06/20/04	2014140000	OlAL	H	IL	INDIRECT LABOR	4013	00.00	0 1,834.21
	06/20/04	2014140000	OIAL	딤	IL	INDIRECT LABOR	4013	00.00	3,705.79
	06/25/04	2014140000	OlAL	NT	LN	NON PROD LABOR	4014	00.00	0 226.91
	06/25/04	2014140000	OIAL	TN	TN	NON PROD LABOR	4014	00.00	0 458.44
	06/30/04	2014140000	OLAL	ΛC	VC	VEHICLE CLEARING 005524530001	3001 4001	00.00	3,276.18
	07/15/04	2014140000		표관	FR	FRINGE BENEFITS	4007	00.00	3,039.66
	07/20/04	2014140000		II	IL	INDIRECT LABOR	4013	00'0	0 2,541.79
	07/25/04	2014140000		LN	NT	NON PROD LABOR	4014	00.00	314.45
	07/31/04	2014140000		VC	VC	VEHICLE CLEARING 005524530001	1001 4001	00.00	0 805.23
						**Total OVERHEADS		00.00	29,256.56
	**Task:	5524530-				Task Units:			802.00
						Task Direct Total:			00.00
						Direct Avg Cost:			00.00
						Task Total: Total Avg Cost:			29,256.56

Program: wwrpt130.p Date: 08/07/2005 Req By: Doug Casey

REPORT TOTALS

Hours: 243.78

Labor: 10.164.83
Purchases: .25,846.40
Materials: 15,681.57
Units: 802
Direct Total: 0.00
Overhead: 29,256.56
Direct Avg Cost: 0.00
Total Avg Cost: 36.48

End of Report

REPORT PARAMETERS

Program: wwrptl30.p Date: 08/07/2005 Req By: Doug Casey

Division Brockton
Work Type : Distribution
Work Category : (All)
Work Code : (All)
Comp/Cont : (All)
Project ID :
Output # : 0000
Source Code : (All)
From Period : 200301
To Period : 200507 Report Type : Detail Order# : 5727669

Program: wwrptl30.p Date: 08/07/2005 Req By: Doug Casey

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MOIN VIGET COSC DECAIL

Type	e Tran Dt	Acct # t	Acct Source Unit Code	Reference	Vendor/Description	Cost Cat	Units	COST
	11/30/04	2012140000 (Ollis PW	290	PAYROLL EXPENSE	6002	4.68	140.82
Ĺ	11/30/04			290		6005	0.64	38.73
H	11/30/04			290		6005	2.34	105.62
卢	11/30/04			290		8009	0.00	6.23 67.04
ᅱ	12/31/04			303	PAYROLL EXPENSE	2002	1.02	153 10
н,	12/31/04		WA 57710	290	PAIROLD BAFRINGE	6005	. c.	157.88
.a ,	12/31/04	2012140000		2000		6005	2.76	124.39
: ∟	12/31/04			303		6005	0.89	53.50
ı	12/31/04			303	PAYROLL EXPENSE	6005	0.38	17.20
J	12/31/04		01115 PW	303	PAYROLL EXPENSE	6005	0.25	11,46
니	12/31/04		01115 PW	303	PAYROLL EXPENSE	6005	0.51	22.93
ŭ	12/31/04	2012140000	01115 PW	303	PAYROLL EXPENSE	8009	00.00	2.73
ĭ	12/31/04	2012140000	01115 PW	290	PAYROLL EXPENSE	6008	00.00	9.12
→	12/31/04	2012140000	01115 PW	290		6002	3.78	113.62
J	12/31/04	2012140000	01115 PW	290		6005	2.30	103.86
Ä	12/31/04	2012140000	01115 PW	290	PAYROLL EXPENSE	8009	00.00	5.07
ŭ	12/31/04	2012140000	01115 PW	1090	PAYROLL EXPENSE	6002	14.16	398.75
H	12/31/04	2012140000	01115 PW	4321	PAYROLL EXPENSE	6002	4.45	81.22
ч	12/31/04	2012140000	01115 PW	813	PAYROLL EXPENSE	6002	5.54	155.89
႕	12/31/04	2012140000	01115 PW	813	PAYROLL EXPENSE	6002	1.38	41.64
₽	12/31/04	2012140000	OIIIS PW	290	PAYROLL EXPENSE	6002	2.37	71.25
H	12/31/04	2012140000	OIIIS PW	353		6002	6.48	194.98
ы	12/31/04	2012140000	01115 PW	353	PAYROLL EXPENSE	6005	3.16	142.58
Н	12/31/04	2012140000	01115 PW	813	PAYROLL EXPENSE	6005	0.52	23.43
H	12/31/04		01115 PW	4321	PAYROLL EXPENSE	6005	2.02	55.21
H	12/31/04		01115 PW	813	PAYROLL EXPENSE	6005	0.95	40.36
μZ	12/31/04	2012140000	01115 PW	813	PAYROLL EXPENSE	6005	0.17	7.34
Н	12/31/04	2012140000	01115 PW	813	PAYROLL EXPENSE	6005	0.17	7.34
ᆔ	12/31/04	2012140000	01115 PW	813	PAYROLL EXPENSE	6005	1.38	58.71
ц	12/31/04	2012140000	01115 PW	1090	,	6005	2.12	89.72
1	12/31/04	2012140000	01115 PW	290		6005	1.26	56.78
1	12/31/04	2012140000	01115 PW	353	_	6008	0.00	3.48
ᄓ	12/31/04		01115 PW	353		6008	6.43	194.98
ᆈ	12/31/04	2012140000	01115 PW	290	PAYROLL EXPENSE	8009	00.0	2.39
,-1	12/31/04	2012140000	01115 PW	1090	PAYROLL EXPENSE	6008	00.0	3.81
ក	12/31/04	2012140000	01115 PW	813	PAYROLL EXPENSE	6008	00.0	3.72
'n	12/31/04	2012140000	01115 PW	4321		6008	0.00	P. 1.
,,	01/31/05	2012140000	01115 PW	4389	PAYROLL EXPENSE	6002	3.36	51.07
	01/31/05	2012140000	01115 PW	4390	PAYROLL EXPENSE	6002	1.52	27.76
.⊶	01/31/05	2012140000	01115 PW	4389	PAYROLL EXPENSE	6005	0.92	21.36
<u></u>	01/31/05		01115 PW	4390	PAYROLL EXPENSE	6005	0.17	4.70
<u>,</u>	01/31/05		01115 PW	4389	PAYROLL EXPENSE	6008	0.00	2.71
,-I	01/31/05		01115 PW	4390	PAYROLL EXPENSE	6008	00.00	0.41
Ţ	04/30/05	2012140000	01115 PW	176	PAYROLL EXPENSE	6002	œ.	297.30
Ţ	04/30/05		01115 PW	187	PAYROLL EXPENSE	6002	2.35	72.54
П	04/30/05		01115 PW	159	PAYROLL EXPENSE	6002	9.32	287.43
ы	04/30/05	2012140000	01115 PW	290	PAYROLL EXPENSE	6002	3.64	112.26
Con	Continued on next	14						

	Cost	97.47	21.05	5.01	-3,733.03	3,733.03	3,733.03	2,248.00	2 820.71	2,724.26	2,527,99	2,248.00	2,248.00	2,248.00	2,689.18	2,551.02	246.40	24B,40	292.60	269.50	269.50	246.40	246.40	246.40	910.50	1.171.50	-7.830.39	246.40	246.40	123.20	5,054.20	73,198.07	5,054.20	23, 198, 07	-7,830.39	20,421.88	35.18	1,397.64	98.48	26.04	997.50	121.16	446,95	8,235.36	17.26	175.75	67.7		
	Units	2.10	0.46	00.00	-112.30	112.30	114.23	0.00	00	00.00	00.00	00.00	00.00	00.00	00.00	00.0	0.00	0.00	00.0	00.0	00.0	00.00	0.00	0.00	0.00	00.0	00.00	0.00	00.00	00.0	00.00	00.00	00.00	00.0	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	00.0	00.0	00.0	00.00	ı	
any System ail	Cost Cat	6005	6005	6008	6002	6002		1609	0091	1609	1609	1609	1609	1609	1609	1609	1606	1000	1606	1606	1606	1606	1606	1606	1609	609t	2207	1606	1606	1606	1606	1609	1606	1609	2207		2209	2209	2207	2207	2209	2207	2207	2206	7550	2207	2207	i E	
Bay State Gas Company Work Order Management System Work Order Cost Detail	Vendor/Description	PAYROLL EXPENSE	PAYROLL EXPENSE	PAYROLL EXPENSE	WOM ACCT RECLASS	WOM ACCT RECLASS	**Total LABOR	12259R H WHITE CONSTRUCTIO	attem n	H WHITE	ELIHM H	H WHITE	H WHITE	12259R H WHITE CONSTRUCTIO	12259R H WHITE CONSTRUCTIO	12259R H WHITE CONSTRUCTIO	LOMOL	LOWN	9/ZFRANKLIN TOWN TREASUR	NMOL		972FRANKLIN TOWN TREASUR	972FRANKLIN TOWN TREASUR	972FRANKLIN TOWN TREASUR	3881CONAM INSPECTION & EN	JASSAK H WHILE CONSTRUCTION OF THE CONSTRUCTIO	Commonwealth of Mass	972FRANKLIN TOWN TREASUR	972FRANKLIN TOWN	972FRANKLIN TOWN TREASUR	ACCT	ACCT	MOM ACCT RECLASS	A CC	ACCT		5"DIA.ABS PLASTIC ROADWAY BOX	6" H17280 BOTTOM OUT FITTING	6 IN 90 DEG. LR WELD ELBOW	6 IN WELD CAP	6 IN WELD END BALL VALVE	2"X 3" H17490 DRILLING NIPPLE		6.625 OD .250 WALL STEEL PIPE		6 IN X 4 IN WELD REDUCER	1 7		
	Reference	159	290	159				2798714 00				815103		2798724 00	2798725 00	Ø			111804 00			111804 00		110404 00	603	2826246 00	0050*070070	120904 00		32405 00							5727669	5727669	5727669	5727669	5727669	5727669	308461	5727669A	308461	308483	308461	/ C # # # 7	
	Acct # Unit Code	e Lin		2012140000 01115 PW	2012140000 01115 25	2014140000 01115 25		DA 03010 0000010100			2 4 5 5	01260	01260	01260	2012140000 01260 AD	01260	01115	01115		ZOIZI40000 ULLIS AD	01115	01115	2012140000 01115 AD	01115	01115	01260	ZUZITOOOO OTTO		01115	2012140000 01115 AD	2012140000 01115 35	01260		2014140000 ULLES 33	0110) † †	2012140000 01115 IS	01115	01115	01115	01115	01115	2012140000 01115 IS		01115	01115		zoizi40000 oiiis page	
Program: wwrpt130.p Date: 08/07/2005 Req By: Doug Casey	Type Tran Dt	L 04/30/05			L 05/04/05			40/20/61 0	10/01/01	E 12/01/04		E 12/09/04							E 12/31/04	E 12/31/04							Š,	E (04/28/05 T (73/39/05			E 05/04/05	E 05/04/05		E 05/04/05			M 11/04/04	M 11/04/04						M 11/16/04		M 11/16/04		M 12/08/04 Continued on next	

41,147.45

Task Total: Total Avg Cost:

ompany	nt System	Detail
Bay State Gas Company	Work Order Management Sy	Work Order Cost Detai

Red By: Doug Casey	asev				Work Order Cost Detail	Work Order Cost Detail	ail		
ဌ	Acct #	Acct Unit	Source Code	Reference	Vendor/Description		Cost Cat	Units	Cost
12/08/04	2012140000	01115	IS	244437	AA SIZE ALKALINE BATTERY		2215	00.00	2.52
12/08/04	2012140000	01115	18	244437	6 IN WELD CAP		2207	00.00	13.02
05/04/05	2012140000	01115	45		WOM ACCT RECLASS		2209	00.00	-11,597.74
05/04/05	2012140000	OIAL	46		WOM ACCT RECLASS		4002	00.00	-1,159.70
05/04/05	2014140000	01115	45		WOM ACCT RECLASS		2209	00.00	11,597.74
05/04/05	2014140000	OIAL	46		WOM ACCT RECLASS		4002	00.00	1,159.70
					**Total	MATERIALS		0.00	11,597.74
11/04/04	2012140000	Olal	SE	MS	STORES CLEARING		4002	00.00	3.51
11/04/04	2012140000		S	MS			4002	00.00	139.76
11/04/04	2140	OIAL	MS	MS	STORES CLEARING		4002	00.00	9.84
11/04/04	2012140000		MS	WS	STORES CLEARING		4002	00.00	2.60
11/04/04	2012140000		MS	MS	STORES CLEARING		4002	00.00	99.75
11/04/04	2012140000	OIAL	MS.	MS	STORES CLEARING		4002	00.00	12.11
11/15/04	2012140000	OIAL	E.	FR	FRINGE BENEFITS		4007	00.00	568.35
11/16/04	2012140000		MS	MS	STORES CLEARING		4002	00.00	44.69
11/16/04	2012140000	OIAL	MS	MS	STORES CLEARING		4002	00.00	823.53
11/16/04	2012140000	OIAL	MS	MS	STORES CLEARING		4002	00.00	2.30
11/16/04	2012140000		WS	MS	STORES CLEARING		4002	00.00	1.72
11/16/04	2012140000		WS	MS	STORES CLEARING		4002	00.00	17.57
11/20/04	2012140000		IL	IL	INDIRECT LABOR		4013	00.0	352,66
11/25/04	2012140000		LN	NT	NON PROD LABOR		4014	00.0	72.87
11/30/04	2012140000	Olal	ĴΛ.	VC	VEHICLE CLEARING	005727669001	4001	00.00	74.50
12/08/04	2012140000		MS	WS	STORES CLEARING		4002	00.00	0.77
12/08/04	2012140000		MS	WS			4002	00.0	0.25
12/08/04	2012140000	Olal	M.S	WS	STORES CLEARING		4002	00.00	1.30
12/15/04	2012140000		FR	FR	FRINGE BENEFITS		4007	00.00	24.41
12/20/04	2012140000		II	IL	INDIRECT LABOR		4013	00.00	24.41
12/25/04	2012140000		T.	TN	NON PROD LABOR		4014	00.00	24.41
12/31/04	2012140000		ΔV	VC	VEHICLE CLEARING	005727669001	4001	0.00	1,010.29
01/31/05	2012140000		VC	VC	VEHICLE CLEARING	005727669001	4001	00.00	60.93
04/15/05	2012140000		T.	FR	FRINGE BENEFITS		4007	00.00	880,83
04/20/05	2012140000		IL	II.	INDIRECT LABOR		4013	00.00	742.04
04/25/05	2012140000		£N	LN	NON PROD LABOR		4014	00.00	139.14
20/05/70	2012140000		ΛC	VC	VEHICLE CLEARING	005727669001	4001	00.00	260.26
05/00/00	0000412106				WOM ACCT RECLASS		4001	00.00	~1,405.98
00/40/00	0000412102		÷ [1.	MOM ACCUT RECTASS		4013	0.00	-1.119.11
00/#0/00	2012140000		4 (+ (°	- E		4014	00 0	-236.42
05/04/05	2012140000		7 (7 .			* TO C Y		1 472 50
05/04/05	2012140000		7.3	1.3	ACCI		4007	5 6	000000000000000000000000000000000000000
05/04/05	2014140000		12	12	ACCI		4001	00.0	1,400.40
05/04/05	2014140000	01AL	7.1	71	ACCT		4013	00.0	TT' STT'T
05/04/05	2014140000		7.2	72	ACCT		4014	00.0	236.42
05/04/05	2014140000	OLAL	73	73			4007	00.00	1,473.59
					**Total	OVERHEADS		00.00	5,394.80
**Task:	5727669-				Task Units	ï.			620.00
					Task Direct Total.				35.752.65

79 . 2 . 3 . 3 . 3 . 3 . 4 .

Cost Cat

Acct Source Unit Code Reference Vendor/Description

Acct #

Type Tran Dt

Program: wwrpt130.p Date: 08/07/2005 Reg By: Doug Casey

Units

Cost

Continued on next page...

Program: wwrpt130.p Date: 08/07/2005 Req By: Doug Casey

Labor: 3,733.03
Purchases: 20,421.88
Materials: 11,597.74
Units: 620
Direct Total: 35,752.65
Overhead: 5,394.80
Total: 41,147.45
Direct Avg Cost: 57.67
Total Avg Cost: 66.37

Hours: 114.23

REPORT TOTALS

ATTACHMENT RR-DTE-138 (b)

Work Order Cost Detail Reports for WO # 5524530 & # 5727669 With Cost Activity through 12/31/04

REPORT PARAMETERS

Report Type: Detail
Order#: 5524530
Division Exception
Work Type: Distribution
Work Category: (All)
Work Category: (All)
Comp/Cont: (All)
Project ID:
Output #: 0000
Source Code: (All)
From Period: 199301
To Period: 200412

Bay State Gas Company D.T.E. 05-27 Attachment RR-DTE-138(b) Page 16 of 22

Bay State Gas Company Work Order Management System Work Order Cost Detail

Program: wwrpt130.p Date: 01/14/2005 Req By: Doug Casey

Order#: 5524530 Task: 001 Project Id: B04D5054 Work Code: MRMIC Output#: 0171 Town/Street: Franklin/Central Stat: 99 07/31/2004

4 22	Tran	Acct # Instr	Source	Reference	Vendor/Description	ים מים דיים דיים דיים בי	Intra	ç
		: :					2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	* * * * * * * * * * * * * * * * * * * *
J	03/31/04	2014140000 01115	LS PW	176	PAYROLL EXPENSE	6002	5.56	167.30
ם	03/31/04	2014140000 01115	Md S	159	PAYROLL EXPENSE	6002	5.56	167.30
1	03/31/04	2014140000 01115	IS PW	159	PAYROLL EXPENSE	6005	0.14	6.27
-1	04/30/04	2014140000 01115	Md 51	159	PAYROLL EXPENSE	6002	7.96	239.52
.3	04/30/04	2014140000 01115	Md S	159	PAYROLL EXPENSE	6005	2.29	103.29
'n	04/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6008	00.0	4.28
'n	04/30/04	2014140000 01115	.5 PW	159	PAYROLL EXPENSE	6002	09.6	288.86
'n	04/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6005	6.00	270.81
J	04/30/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6008	00.0	12.90
ü	04/30/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6002	9.60	288.86
	04/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6005	6.00	270.81
.1	04/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6008	00.0	12.90
'n	06/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6002	8.96	269.61
J	06/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6005	1.26	56.87
ڊ	06/30/04	2014140000 01115	S. PW	159	PAYROLL EXPENSE	6005	5.60	252,76
H	06/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6005	3.64	219.06
ټ.	06/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6009	00.0	18.06
3	06/30/04	2014140000 01115	Md S	1090	PAYROLL EXPENSE	6002	6.29	177.07
. 2	06/30/04	2014140000 01115	Md S	159	PAYROLL EXPENSE	6002	4.70	141.54
ŭ	06/30/04	2014140000 01115	Md S	1090	PAYROLL EXPENSE	6005	6.68	470.34
.7	06/30/04	2014140000 01115	S PW	1090	PAYROLL EXPENSE	6005	18.08	1,018.15
п	06/30/04	2014140000 01115	5 PW	1090	PAYROLL EXPENSE	6005	12.18	514.61
า	06/30/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6005	13.52	813.87
ח	06/30/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6005	11.76	530.79
7	06/30/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6008	00.0	69.53
H	06/30/04	2014140000 01115	5 PW	1090	PAYROLL EXPENSE	6008	00.00	84.50
1	06/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6002	17.24	518.75
.7	06/30/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6005	2.16	129.69
₽	06/30/04	2014140000 01115	Md S	159	PAYROLL EXPENSE	6005	8.62	389.06
. .3	06/30/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6009	00.00	.37.07
'n	07/31/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6002	11.84	356.27
J	07/31/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6005	0.22	8.91
ı	07/31/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6005	2.81	169.23
נ.	07/31/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6005	5.92	267.20
ני	07/31/04	2014140000 01115	5 PW	159	PAYROLL EXPENSE	6008	00.00	15.91
ᄓ	07/31/04	2014140000 01115	S PW	159	PAYROLL EXPENSE	6002	1.32	39.72
u	07/31/04	2014140000 01115	S PW	953	PAYROLL EXPENSE	6002	8.00	225.28
,7	07/31/04	2014140000 01115	S PW	1224	PAYROLL EXPENSE	6002	3.48	98.00
יו	07/31/04	2014140000 01115	S PW	296	PAYROLL EXPENSE	6002	5.06	134.44
.7	07/31/04	2014140000 01115	5 PW	353	PAYROLL EXPENSE	6002	8.88	267.20
H	07/31/04	2014140000 01115	S PW	813	PAYROLL EXPENSE	6002	3.65	102.73
H	07/31/04	2014140000 01115	5 PW	596	PAYROLL EXPENSE	6005	0.16	10.50
,a	07/31/04	2014140000 01115	S PW	813	PAYROLL EXPENSE	6005	0.46	32.10
J	07/31/04	2014140000 01115	Md S	353	PAYROLL EXPENSE	6005	1.89	113.56
1	07/31/04	2014140000 01115	S PW	813	PAYROLL EXPENSE	6005	0.11	6.42
,ع	07/31/04	2014140000 01115	S PW	1224	PAYROLL EXPENSE	6005	2.39	101.06
.1	07/31/04	2014140000 01115	7 PW	953	PAYROLL EXPENSE	6005	4.00	168.96
ئہ ،	07/31/04		S PW	813	PAYROLL EXPENSE	6005	0.91	39.52
, to C	Continued on next	Darie.						
)		, , , , , , , , , , , , , , , , , , ,						

Program: wwrpt130.p Date: 01/14/2005

		Cost	4.01	202.02	32.45	14.82	24.70	90.00	00.0	6.42	6.42	4.20	9.88	14.03	8.58	10.75	9.57	. 83	ç.	2 5	37	. 22	891.96	. 44	. 44	858.00	016.00	820.60) K	937.24	.00	316.00	4.	0 0	364.76	00.	00.	00.	902.00	00.	905.00	00.408) ii	719.00	123.20	385.00	292.60	60
	,		4	202	32	14	4	,	0 0		. 0	. 4	60	14	œ	01	oor	10,164.83	00 00 0	0,40,4	785 5		1,891	2,749.44	1,701.44		2,016	1,820.60	7,080.00	2,937	2,316.00	2,316	4,434.14	2,806.30	2,316.00	1,905.00	2,667.00	1,905.00	1,905	1,980.00	1,905	1,905.00	3,272.51	2,719	123	58 F	292	292
٠	۴.	Units	0.06	4.44	0.79	0.34	0.57	77.7	0.33	0.11	0.11	0.08	0.23	00.0	00.00	00.00	00.0	243.78	o o	0.00	00.0	00.0	00.00	00.00	00.0	00.00	0.00	0.00	0.00	0.00	00.00	00.0	0.00	0.00	0.00	00.00	00.0	00.0	00.0	0.00	0.00	00.0	00.0	0.00	00.00	0,00	0.00	00.0
Detail		Cost Cat	6005	6005	6005	6005	6005	6005	4004	6003 6005	5005	6005	6005	6009	8009	6008	6008 6008	3	,	6097	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1609	1606	1606	1606	1606
Work Order Cost Detail		Vendor/Description	PAYROLL EXPENSE		PAYROLL EXPENSE	PAYROLL EXPENSE			Ċ	PAINOLL EXPENSE PAVPOLL EXPENSE					PAXROLL EXPENSE		PAYROLL EXPENSE			. UTILITY	. UTILITY	1359IN.E. ULLLII CONSINC	. UTTI.TTY	. UTILITY	. UTILITY	. UTILITY	. UTILITY		314BMS-D	1359IN.E. UILLII CONSINCE	. UTILITY	13591N.E. UTILITY CONSTRUC	. UTILITY	. UTILITY	13591N.E. UTILITY CONSTRUC		. UTILITY	. UTILITY	. UTILITY	. UTILITY	. UTILITY	. UTILITY	1359IN.E. UILLITY CONSTRUCT	. UTILITY	KLIN TOWN	TOWN		STREASTER TOWN TREASTER
		Reference Ve	813 PA							813 PA				4			596 PA			G4498101	G4498102	34498103	G4430104	G4498106	G4498107	G4498108	G4498109	G4498110	107959	G4498111	G4498113	G4498114	G4498115	G4498116	G4498118	GAAGALIY	G4498121	G4498122	G4498123	G4498124	G4498125	G4498126	G4498127	G5106022	61704	61704	61704	70012
	Acct	Acct # Unit Code	2014140000 01115 PW	01115	2014140000 01115 PW	2014140000 01115 PW	014140000 01115	014140000 01115	014140000 01115	ZOI4140000 OILIS PW	01115	014140000 01115	014140000 01115	01115		014140000 01115	014140000	7014140000 01117 FM		014140000 01260	01260	01260	ZUIAIAUUUU ULZBU AD		01260	01260	2014140000 01260 AD	014140000 01260	014140000 01140	014140000	014140000 01250	014140000 01260	2014140000 01260 AD		01260	2014140000 01260 AD	014140000 01250	014140000 01260	014140000	2014140000 01260 AD	014140000 01260	014140000 01260	2014140000 01260 AD		01115	01115	2014140000 01115 AD	
Red By: Dong Casey		Tran Dt A	07/31/04 2		C	07/31/04 2		~				07/31/04 2	* ^	1 (%	N	07/31/04 2	07/31/04 2	07/31/04 2		04/29/04 2				05/06/04 2				7	N		05/29/04 2	: 14		06/29/04 2		CH C	07/01/04 2	1 (1	7	21	07/01/04 2	N	CN C	07/06/04 2	1 (1	07/31/04 2	N	•
Ć.	2	Туре	ئے :	1 -1	ü	J	a	ü	н.	٠.	J.	٦.	.,	- د	1	. .3	ᆔ	-3		ĽΔ	ω	ĮŲ.	組	មា ខ	4 4	1 60	ω	м	ш	(<u>d</u>	13 (4)	a 64	碰	ы	Œ	ध्या	54 G	a (x	1 GQ	ĸ	ы	Ø	6 4	GG (n (4	i (xi	ĸ	l

the Company of the Party	bong casey			Work Order Cost Detail	: Detail		
Type Tran Dt	Acct #	Acct Source Unit Code	e)	Reference Vendor/Description	Cost Cat	Units	Cost
07/31/04	2014140000	01115 AD	61704	972FRANKLIN TOWN TREASUR	1606	00.0	246.40
07/31/04	2014140000	01115 AD	62404	972FRANKLIN TOWN TREASUR	1606	00.0	385.00
07/31/04	2014140000		454004	20456MIDDLESEX CORPORATION		00.00	14,000.00
08/31/04			72204	972FRANKLIN TOWN TREASUR		00.00	246.40
08/31/04	2014140000		72204	972FRANKLIN TOWN TREASUR		0.00	515.90
10/31/04	2014140000	01140 AD	1045	18377LB&A	2207	00.00	3,003.50
				**Total PURCHASES		0.00	89,733.63
04/02/04	2014140000	01115 IS	2640	6 IN WELD LINE STOP FITTING	2209	00.00	1,342.50
04/02/04	2014140000	01115 IS	2640	6 IN WELD CAP	2207	00.0	29.16
04/02/04	40000	m	2640	6 IN 90 DEG. LR WELD ELBOW	2207	00.00	189.91
04/02/04	40000		2640	6.625 OD .250 WALL STEEL PIPE	2206	00.00	5,279.18
04/02/04	40000		2640	6 IN WELD END BALL VALVE		00.0	997.50
04/14/04	2014140000		2861	4"X75 35MIL TAPECOAT H35 GREY		0.00	310.82
04/14/04	40000		2861	16 OZ CAN TEFLON PASTE	2209	0.00	43.40
06/03/04	00004		777	o IN WELL CAP		00.00	07.67
06/07/04	2014140000	01140 18	2/16	#"X/5' 35MIL TAPECOAT H35 GREY	2209	00.00	516.42
#0/10/90	0000		DT / 7	ACC OF DEC LIMIT CONCERN ACC ACC ACC ACC ACC ACC ACC ACC ACC AC	2000	00.0	מוינה מוא ה
06/07/04	40000		2717	6 625 OD .230 HAM SIEBE FIFE 6 625 OD .280 WALL STEEL DIDE	2206	00.0	25.50.10
06/07/04	40000		2717	VALVE	2209	00.00	498.75
06/07/04	40000		2716		2207	00.00	24.90
\$0/20/90		01140 IS	2716		2209	0.00	1,496.25
06/14/04	2014140000	01115 IS	2720	6 IN 90 DEG. LR WELD ELBOW	2207	00.00	21.68
06/14/04	40000		2720	2"X 3" H17490 DRILLING NIPPLE	2207	00.00	30.26
06/14/04	2014140000	01115 IS	2720	6 IN 45 DEG. LR WELD ELBOW	2207	00.00	20.01
				**Total MATERIALS		0.00	15,681.57
03/15/04	2014140000	Olal FR	F	FRINGE BENEFITS	4007	0.00	354.50
03/20/04		Olal IL	IL	INDIRECT LABOR	4013	00.0	306.78
03/25/04	2014140000	Olal NT	Ķ	NON PROD LABOR	4014	0.00	54.54
03/31/04	2014140000	OIAL VC	VC	VEHICLE CLEARING 005524530001	4001	00.00	128.42
04/02/04	2014140000	Olal MS	WS	STORES CLEARING	4002	0.00	281,92
04/02/04	2014140000	01AL MS	MS	STORES CLEARING	4002	00.0	6.12
04/02/04	2014140000	Olal MS	MS	STORES CLEARING	4002	00.00	39.88
04/02/04	2014140000	Olal MS	MS	STORES CLEARING	4002	00.0	1,108.62
04/02/04	2014140000	OIAL MS	MS	STORES CLEARING	4002	00.0	209.47
04/14/04		Olal MS	WS	STORES CLEARING	4002	00.0	65.27
04/14/04	2014140000	OLAL MS	WS	STORES CLEARING	4002	00.0	9.11
04/15/04		OlAL FR	FR	FRINGE BENEFITS	4007	00.0	1,066.81
04/20/04		01AL IL	IL	INDIRECT LABOR	4013	00.0	892.07
04/25/04		Olal NT	Ę.	NON PROD LABOR	4014	00.0	110.36
04/30/04		OLAL VC	VC	VEHICLE CLEARING 005524530001	4001	00.0	222.24
06/03/04	2014140000	01AL MS	МS	STORES CLEARING	4002	00.0	4.13
06/07/04	2014140000	01AL MS	ws	STORES CLEARING	4002	00.0	129.44
06/01/04		01AL MS	WS		4002	00.00	7.38
40/00/90		OIAL MS	WS	STORES CLEARING	4002	00.00	726.32
06/01/04			WS		4002	00.00	266.12
06/01/04	2014140000 (OIAL MS	WS	STORES CLEARING	4002	00.00	104.73
06/01/04	2014140000 (OIAL MS	MS	STORES CLEARING	4002	00.0	5.22
\$0/00/90	2014140000	Olal MS	MS	STORES CLEARING	4002	00.00	314.21

α.			Вау	Bay State Gas Company	Company		
200			Work Or	Work Order Management System	int System		
iey			Work	Work Order Cost Detail	Detail		
Acct	Source						
Acct # Unit	Code	Reference	Reference Vendor/Description		Cost Cat	Units	Cost
2014140000 01AL	WS	MS	STORES CLEARING	; ; ; ; ; ; ; ;	4002	00.0	6.35
2014140000 01AL	MS.	MS	STORES CLEARING		4002	00.00	4.20
2014140000 01AL	FR	FR	FRINGE BENEFITS		4007	00.0	2,193.48
2014140000 01AL	E.	FR	FRINGE BENEFITS		4007	00.00	4,431.66
2014140000 01AL	II	II	INDIRECT LABOR		4013	00.0	1,834.21
2014140000 01AL	T	11	INDIRECT LABOR		4013	00.0	3,705.79
2014140000 01AL	ξŃ	NT	NON PROD LABOR		4014	00.00	226.91
2014140000 01AL	TN.	Ę	NON PROD LABOR		4014	00.00	458.44
2014140000 01AL	ΛC	VC	VEHICLE CLEARING 0	005524530001	4001	00.00	3,276.18
2014140000 01AL	FR	FR	FRINGE BENEFITS		4007	00.0	3,039.66
2014140000 01AL	IL	11	INDIRECT LABOR		4013	00.0	2,541.79
2014140000 01AL	NT	TN	NON PROD LABOR		4014	00.0	314.45
2014140000 01AL	VC	VC	VEHICLE CLEARING 0	005524530001	4001	00.00	805.23
			**Total OVERHEADS	OVERHEADS		00.0	29,256.56
5524530			Task Units:	,, m			802.00
			Task Direct Total:				115,580.03
			Direct Avg Cost:				144.11
			Task Total:				144,836.59
			Total Avg Cost:				180.59

06/14/04 06/14/04 06/15/04 06/15/04 06/25/04 06/25/04 06/25/04 06/30/04 07/26/04 07/26/04

Type Tran Dt

Program: wwrpt130.p Date: 01/14/2005 Reg By: Doug Casey

**Task:

3

Work Order Management System Work Order Cost Detail Bay State Gas Company

> REPORT PARAMETERS 计算计算计 电光线接收器 经收益 化二氯化物 化二氯化物 医二氯化物 医二氯化物

Report Type : Detail
Order# 5727669
Division : Broekton
Work Type : Distribution
Work Category : (All)
Work Code : (All)
Comp/Cont : (All)
Project ID :
Output # : 0000
Source Code : (All)
From Period : 200301
To Period : 200411

Program: wwrpt130.p Date: 06/20/2005 Req By: Doug Casey

14,091.63

Task Total: Total Avg Cost:

Bay State Gas Company Work Order Management System Work Order Cost Detail

MOTK UIGHT LUBL DECALL

Program: wwrptl30.p Date: 06/20/2005 Req By: Doug Casey Order#: 5727669 Task: 001 Project Id: B04D5054 Work Code: MRMIC Output#: 0171 Town/Street: Franklin/Central Stat: 99 04/30/2005

Cost	140.82	38.73	105.62	6.29	291.46	35.18	1,397.64	98,48	26.04	997.50	121.16	446.95	8,235.36	23.09	17.26	175.75	11,574.41	3.51	139.76	9.84	2.60	99.75	12.11	568.35	44.69	823.53	2.30	1.72	17.57	352.66	72.87	74.50	2,225.76	620.00	11,865.87	19.14
Units	4.68	0.64	2.34	00.0	7.66	00.00	00.0	00.00	0.00	00.0	00.00	0.00	00.00	00.00	0.00	00.0	00.00	00.00	0.00	00.00	00.00	00.00	00.00	00.00	0.00	00.00	0.00	00.00	00.00	00.0	00.00	00.00	00.00			
Cost Cat	6002	6005	6005	6009		2209	2209	2207	2207	2209	2207	2207	2206	2207	2207	2209		4002	4002	4002	4002	4002	4002	4007	4002	4002	4002	4002	4002	4013	4014	4001				
Reference Vendor/Description	PAYROLL EXPENSE		PAYROLL EXPENSE	PAYROLL EXPENSE	**Total LABOR	S"DIA, ABS PLASTIC ROADWAY BOX	6" H17280 BOTTOM OUT FITTING	6 IN 90 DEG. LR WELD ELBOW	6 IN WELD CAP	6 IN WELLD END BALL VALVE	2"X 3" H17490 DRILLING NIPPLE	4" H17260 BOTTOM OUT FITTING	6.625 OD .250 WALL STEEL PIPE	4 IN 90 DEG. LR WELD ELBOW	6 IN X 4 IN WELD REDUCER			STORES CLEARING									STORES CLEARING	STORES CLEARING	STORES CLEARING	INDIRECT LABOR	NON PROD LABOR	VEHICLE CLEARING 005727669001	-	Task Units:	Task Direct Total:	Direct Avg Cost:
	290	290	290	290		57276	57276	57276	57276	57276	57276	3084	572766	3084	3084	3084		ŭ,	S. W	v.	S. S.	S S	SW	FR	S	WS	MS	MS	MS	IL	IN	ΛC	?			
# ئا ئا	2012140000 01115 PW		2012140000 01115 PW	2012140000 01115 PW		2012140000 01115 IS	1115 1	01115 I	01115		01115	01115	01115	01115	01115	01115		MS MS MS	1410	7 T T C	1410	יומנט	0127	01.81.	OIAL		01AL	OlAL	OIAL	OlAL	OIAL	01.87.		5727669-		
Type Tran Dt	13/30/04	13/30/04				M 11/04/04				M 11/04/04								11 (04 (04								11/16/04			, .			, .	•	**Task:		

Time:

rogram: wwrptl30.p Date: 06/20/2005 Req By: Doug Casey

EPORT TOTALS

Hours: 7.66 Labor: 291.46 Purchases: 0.00

Materials: 11,574.41
Units: 620
Direct Total: 11,865.87
Overhead: 2,225.76
Total: 14,091.63
Direct Avg Cost: 19.14
Total Avg Cost: 22.73

RESPONSE OF BAY STATE GAS COMPANY TO THE THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E. D. T. E. 05-27

Date: August 19, 2005

Responsible: Danny G. Cote, General Manager

RR-DTE-148: Refer to revised DTE-3-21. With reference to reimbursed work being performed on project List No. 4, provide any amount reimbursed by third parties. Also indicate whether or not those amounts, if any, were credited to the project.

Response: The Massachusetts Highway Department reimbursed the Company \$123,410.42. The amount was credited on 2/28/05 to work order numbers 552430 and 5727669 for \$115,580.03 and \$7,830.39, respectively. Please see the response for RR-DTE-138 and Attachment RR-DTE-138 (b) for copies of the work order cost detail reports for work order 552430 and 5727669. The reimbursement amount credited to work order 552430 has been circled and is on page 5 of Attachment RR-DTE-138 (b). The reimbursement amount credited to work order 5727669 has been circled and is on page 10 of Attachment RR-DTE-138 (b).

RESPONSE OF BAY STATE GAS COMPANY TO THE THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E. D. T. E. 05-27

Date: August 19, 2005

Responsible: Danny G. Cote, General Manager

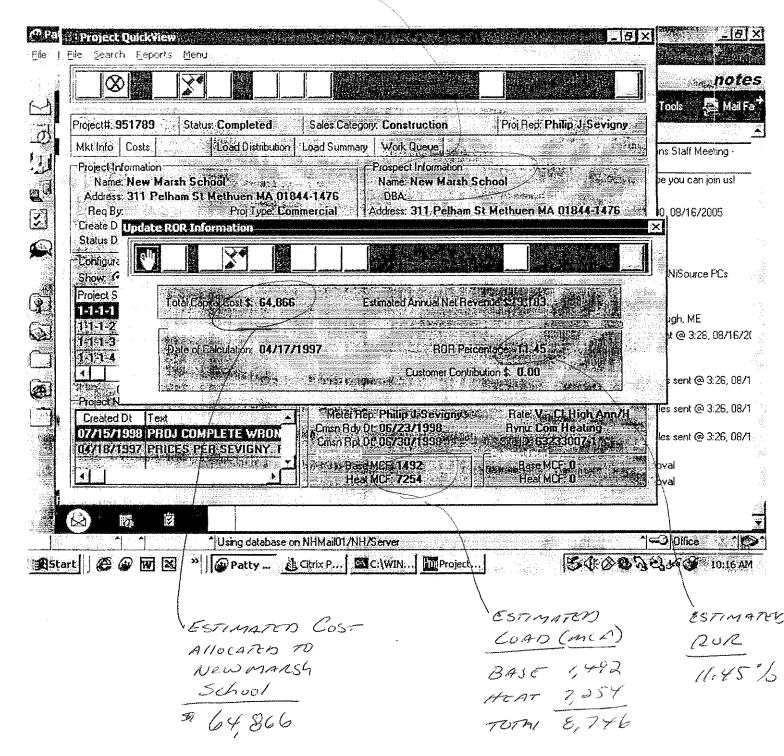
RR-DTE-152: Refer to DTE-3-21. Provide supporting calculation for the pre-construction Rate of Return ("ROR) of 11.45 percent

Response: The Company did not retain a paper hardcopy of the ROR calculation for

the New Marsh School. However, see Attachment RR-DTE-152 for the Project Quickview from Bay State Gas Sales System. The Project Quickview report provides the estimated ROR and the estimated total capital cost and estimated load assumptions used to calculate the ROR. The total estimated main cost for Project L96D0058, List No. 69, was \$157,642 of which \$64,866 or 41% was allocated to the New Marsh School portion of the project. The estimated load used to support the investment was 8,746 Mcf. The actual billed load for the New Marsh School was 12,659 Mcf in 2004, 9,137 Mcf in 2003, 9,124 Mcf in 2002, 6,020 Mcf in 2001, 8,019 Mcf in 2000, 8,218 Mcf in 1999 and 4,809 Mcf

for 8 months of 1998.

CUSTOMER NAME NOW MARSE School-



COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E. D. T. E. 05-27

Date: August 19, 2005

Responsible: Danny G. Cote, General Manager

RR-DTE-154: Provide a redlined strikeout version of the summary page for DTE-3-21 (Revised) comparing the original DTE-3-21 summary page to the DTE-3-21 (Revised) filed on July 3, 2005.

Response: Please see Attachment RR-DTE-154 for a redlined strikeout of the summary page for DTE-3-21 (Revised) comparing the original DTE-3-21

summary page to the DTE-3-21 (Revised) filed on July 3, 2005.

			Non-l Acc	Non-Discretionary Plant Additions Account 367 (Mains) > \$100K ¹	Additions \$100K ¹			
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
List No.	Year	Location	Pre-Construction	Actual Cost - Mains³	Amount the Estimate Varied from Actual	Percentage of Actual Cost Over	Total ⁴ Cost – Mains	Project ID
			Cost - Mains		Cost	or Under (-) in		
					((-)/+)	relation to		
						Estimate		
						(%)		
	2004	Taunton/ Short	\$141,825	\$121,839	(986'618)	-14%	\$145,196	B04D5072
1	,	Street		\$159,737	\$17,912	12%	\$198,378	
2	2004	Attleboro / County	\$74,588	\$212,140	\$137,552	See Justification	\$242,403	B04D5071
······		Street		\$212,281	\$137,693		8261,990	
Justification fo	r Cost Variance - I	List Nos. 2, 3: MAIN RE	PLACEMENT. As a po	Justification for Cost Variance - List Nos. 2, 3. MAIN REPLACEMENT. As a permit condition, the Town of Attleboro mandated that all excavated soils had to be removed and be replaced with	of Attleboro mandated the	at all excavated soils	had to be removed and	be replaced with
clean sand and	gravel. Extra work	required by municipal per	mit requirements invol-	clean sand and gravel. Extra work required by municipal permit requirements involved backfilling to specifications and applying an asphalt cover; later the Town required that patch be removed	specifications and applying	ng an asphalt cover; h	ater the Town required	I that patch be removed
and filled with (concrete. This unan	ticipated work increased t	the time, man-hours and	and filled with concrete. This unanticipated work increased the time, man-hours and police traffic details necessary to complete the project.	ssary to complete the proj	ect.		
3	2004	Attleboro / Thatcher \$56,112	\$56,112	\$106,001	\$40,889	See Justification	132,103	B04D5068
		Ave.					\$148,337	

clean sand and gravel. Extra work required by municipal permit requirements involved backfilling to specific specifications and applying an asphalt cover; later the Town required that patch be removed and filled with concrete. This unanticipated work increased the time, man-hours and notice traffic details necessary to complete the project Justification for Cost Variance - List Nos. 2, 3. MAIN REPLACEMENT. As a permit condition, the Town of Attleboro mandated that all excavated soils had to be removed and be replaced with

	4	2004	Franklin / West	\$130,957	8133,668	\$2,744	5%	\$157,442	B04D5054	
Stoughton / Brock \$35,372 \$110,610 \$75,238 See Justification \$129,203 Street Street \$141,746			Central St.		\$42,055	\$88,902	67%	\$81,865		T
Street	2	2004	Stoughton / Brock	\$35,372	\$110,610	\$75,238	See Justification	\$129,203	B04D5018	
)	· ·	Street					\$141,746		

deteriorated than had been estimated. Placement of increased feet of badly deteriorated pipe increased the scope of the initial project on materials by 50%. In addition, the Town of Stoughton mandated the presence of two police officers on traffic detail during elongated construction. Ledge was encountered during the project, slowing the rate of construction and adding to excavation costs. In addition to the difficulty in digging the pipe trench, the excavated ledge fragments had to be bauled away for disposal. Clean sand and gravel replaced for backfull material S03D1082 See Justification \$142,572 \$44,465 \$121,891 \$77,426 Easthampton West

_						Αŧ
	imeter bare steel pipe in	on to good main. The new	were incurred to monitor		S03D1053	
100,0416	3925 feet of 4' dia	re was a connection	Added labor costs		\$475,089	\$494,437
	, the project replaced	rk continued until the	gth of pipe required.		See Justification	
	IAIN. Although originally planned to include 3300 feet of replacement, the project replaced 3925 feet of 4' diameter bare steel pipe in	poor condition with a mix of 2" and 4" plastic main. Limits of construction expanded because pipe exposed was in bad condition. Work continued until there was a connection to good main. The new	main connected to a new regulator station. The location of the regulator station was moved in the permitting process, adding to the length of pipe required. Added labor costs were incurred to monitor		\$218,411	\$238.443
	originally planned to inclu	anded because pipe exposed	was moved in the permittin		\$437,968	8458 000
	MAIN. Although	of construction exp	he regulator station		\$219,557	
Street	Justification for Cost Variance - List No. 6: BARE STEEL M.	nd 4" plastic main. Limits	r station. The location of t	leaks on the existing main during replacement construction.	W. Springfield/	West Side Unrate
	or Cost Variance	with a mix of 2" at	to a new regulato	isting main during	2003	;
	Justification fe	poor condition	main connected	leaks on the ext	7	-

Justifications provided for variances over 10%.

Estimated Cost - Mains is Direct Main Cost only. Actual Cost - Mains is Direct Main Cost only

Total Cost - Mains is Actual Indirect and Direct Main Costs for the Project.

	\ \{ \{			Account 367 (Mains) > \$100K ¹	. \$100K ¹		8 105	Col 0
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5		Col. /	C.01. 0	C.01. 7
List No.	Үеаг	Location	Pre- Construction	Actual	Amount the Estimate	Percentage of	l otal?	Project ID
			Estimated	Cost - Mains ³	Varied from Actual	Actual Cost Over	Cost - Mains	
			Cost - Mains		Cost	or Under (-) in		
					(+/(-))	relation to		
						Estimate		
				***************************************		(%)		
Justification fo	r Cost Variance	Justification for Cost Variance - List No. 7: BARE STEEL MAIN. Project replaced 1940 feet of 6" diameter bare steel main with 8" diameter coated steel pipe (to increase distribution capacity).	L MAIN. Project repla	aced 1940 feet of 6" diame	ter bare steel main with 8"	diameter coated stee	pipe (to increase dis	tribution capacity).
An additional 1.	395 feet of new m	An additional 1395 feet of new main was also installed, allowing the system maximum allowable operating pressure to increase from 60 pounds per square inch (psi) to 99 psi. Early snow and	wing the system maxin	num allowable operating pr	ressure to increase from 60) pounds per square ir	ich (psi) to 99 psi E	arly snow and
trong transferi	er delayed the nr	siect in 2003. By the time	conditions allowed con	inclement weather delayed the argiert in 2003. By the time conditions allowed continuation. West Springfield had imposed street opening moratorium, that required closing up for winter and re-	d had imposed street open	ing moratorium, that i	required closing up fo	or winter and re-

mobilizing the project in the spring. New requirements were imposed by the City Council for more extensive street resurfacing along River Street and the Memorial Avenue crossing. The City Council also changed the previously agreed-upon location of a pressure reducing station, adding to material and labor costs.

Justification for Cost Variance - List No.8: BARE STEEL MAIN. Project to replace over 5,280 feet of badly deteriorating 2" bare steel main with 2" plastic pipe. Closing up the worksite at the end roadway rather than, as estimated, overlay limited to trench width. In addition, unanticipated quantities of ledge and large boulders were extracted, and clean sand and gravel had to be used as backfill of 2003 construction and re-mobilizing in 2004 added costs. Town of Northampton imposed changes in street restoration requirements after construction began, requiring overlay on large sections of See Justification \$106,129 Northampton / Leeds Uprate and ground support.

Justification for Cost Variance—List No. 9: MAIN REPLACEMENT. Post-estimate project scope was extended to include the City of Lawrence intersection of Water Street and Canal Street. Due to the time of year the decision to extend was made and the location, extra costs were incurred to maintain system integrity. Frost set in earlier than expected and elongated work time. Work site had to be \$335,779 \$198,073 Sec Justification \$134,130 \$251,159 secured for winter and then reopened and completed in spring and summer of 2004. \$117,029 Broadway St. 2003

See Justification

\$56,918

\$175,410

\$118,492

Sharon / S. Main St.

Justification for Cost Variance—List No. 10. BARE STEEL MAIN. Project estimated in concert with Commonwealth's plans to undertake street reconstruction along two miles of South Main Street in Sharon. In the first phase of the construction, 2,500 feet of deteriorating 3" bare steel main was replaced with new 8" plastic pape. Sharon then unexpectedly specified construction start times of post-9 a.m. and end times of 4:00 p.m. ease rush hour traffic congestion. The unexpected shorter workday elongated the project (more man-days required). Four police details were maintained to \$214,861 control road traffic and ensure site worker safety

\$422,786

operating pressure (MAOP), improving gas supply pressure and volumes. The existing cast iron did not perform as expected during trench excavation and as the water main was replaced; leaks developed and were managed; the project was expanded into two adjoining streets (Orchard St., Charles St.), increasing the total length of new plastic main installed to 4350 feet. In addition, the City are required two police details, instead of the estimated single detail. High traffic volume and delays in the City's construction timetable required the installation (with infrared) and the concrete (8" thick) had to be opened; concealed, buried and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined structure of the concrete overlay of reinforced concrete (8" thick) had to be opened; concealed, buried and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and abandoned hundred-year old trolley tracks and ties had to be excavated, sized for transfer, trucked and adjoined and a surrounding streets), this project replaced cast from pipe that would have been disturbed by the City's water main replacement project. Original estimates showed a need for 3300 feet of new plastic main to replace old cast iron main. Engineering estimates and distribution system planning called for converting the low pressure main in this area to a 99 pound per square inch (psi) maximum allowable Justification for Cost Variance—List No. 11: CAST IRON MAIN. In conjunction with a planned municipal street opening in Taunton (replacing 7000 feet of water main under Somerset Ave and operating pressure (MAOP), improving gas supply pressure and volumes. The existing cast iron did not perform as expected during trench excavation and as the water main was replaced; leaks \$465,769 See Justification \$225,779 \$240,585 \$376,714 \$391,520 \$150,935 Taunton / Somerset 2003

a	ge	2	0
a	7736 /0-7001		
	\$175,855		
	See Justification		
	\$96,946		
	\$156,946		
	000'098		
	Ludlow / Inter wk	20" MMWEC	The state of the s
	2002		
disposed of	12		

"REDLINED" Version Filed on July 3, 2005 DTE-3-21 REVISED

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
List No.	Year	Location	Pre-Construction Estimated Cost - Mains ²	Actual Cost - Mains	re Estimate m Actual	Percentage of Total ⁴ Actual Cost Over Cost - Mains or Under (-) in relation to Estimate (%)	Total ⁴ Cost - Mains	Project ID

Justification for Cost Variance - List No. 12: INTERCONNECT. The connecting supply point pipeline was of an insufficient depth at the proposed interconnect. Additional excavations, littings and complex ap configurations were required. Additionally, in an unanticipated post-estimate revision, the Town of Ludlow required design modifications for the interconnect. 24/7 police details at the site S0211018 501105 during construction was required to thwart vandals at the ste.

deteriorated section of 10" cast iron main with 10" plastic pipe. Based on distribution gas flow then expected from the new regulator, pipe size increased to 12". After exposing the pipe, more pipe was replaced than estimated and more tierins required. Main Street in Springfield is highly traveled Route 116. Initial post-estimate permitting included higher cost activities of saw cutting the street, excavating and removing all excavated soils and backfilling using flowable fill. Finally carly snow in fall/winter 2003 caused early site closure, additional contractor erew time and materials charges and restart costs in the spring.
nain with 10" plastic pip fore pipe was replaced tha the street, excavating and tharges and restart costs ir W. Springfield /

transported away. Un expected re-routing of pipe required because of competing subsurface utilities (telephone). Re-routing increased man-hours, equipment usage and police presence to control traffig Justification for Cost Variance—List No. 14: CAST IRON MAIN. In conjunction with municipality's stated intent to conduct major street reconstruction, the estimate was to replac confirmed 3600 feet of main. Estimate of contractor services was too low. In addition, concealed and buried railroad ties had to be extracted completely (required larger trench to be excavated), cut for disposal and \$205,232 Memorial Ave and ensure worker safety.

Justification for Cost Variance - List No. 15: BARE STEEL MAIN. Replacement of 1400 feet of bare steel pipe in Johnson St. was estimated, but more was deteriorated, extending the project an L2002D0046 \$106,787 \$107,840 See Justification \$25,113 \$103,892 \$78,779 North Andover / Johnson St. additional 300 feet in order to tie-in. 200215

Justification for Cost Variance - List No. 16: CONNECTING COATED STEEL. Following construction of a new gate station in Sharon, the project called for 900 feet of 12" coated steel to connect to an existing 12" main. The estimate was based on the most recent bids for installing 8" main, with allowance for construction with use of a larger diameter pipe. However, open bids exceeded the estimate. There were unexpected costs in managing time and materials in installing the 12" main and coordinating the same with the on-going gate station construction. Final construction costs additional an unexpected 134 feet of main to link to an interstate pipeline meter and regulator station owned jointly by Algonquin and Duke. \$133,769 See Justification \$103,608 \$65,146 Sharon / Canton St. 2002

17								
	2002	17 2002 Holbrook / Union St. \$176,257	\$176,257	5188,535	\$12,278	7%	\$229,452	B02D5015
•	1						\$245,312	
18	2002	Norton / Freeman	\$174,770	\$150,573	(\$24,197)	(14%)	\$163,215	B02D5012
2		St.		•			\$174,257	
19	2001	Chicopee/	\$59,194	\$104,408	\$45,214	See Justification	686,8213	S01D1030
		Broadway St.					\$155,383	***************************************
	and Annaton and An			The state of the s				

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
ist No.	Vear	Location	Pre- Construction	Actual	Amount the Estimate	Percentage of	Total*	Project ID
}			Estimated	Cost - Mains ³	Varied from Actual	Actual Cost Over Cost Mains	Cost Mains	
			Cost - Mains		Cost	or Under (-) in		
					((-)/+)	relation to		
						Estimate		
			- A MASSIP			(%)		

for the project included costs associated with replacement of 2000 feet of deteriorating cast iron main. Initial estimate assumed project coordination would eliminate costs associated with breaking and restoring pavement. When the municipality unexpectedly delayed its planned construction, Bay State had to excavate the existing road surface, reduce and remove move an 8' thick layer of reinforced concrete, and saw cut for the entire 2000 foot project length. Bay State then was required to excavate and dispose of the surface and subsurface waste; such costs were not contained in the initial estimate

20	2001	W. Springfield / Memorial Ave	\$235,856	\$2/7,44/	196,146	See Justification \$407,060	\$21.0,332 \$407,060	2010.042	
Justification for	r Cost Variance-	List No. 20 BARE STE	EL AND CAST IRON	Justification for Cost Variance - List No. 20: BARE STEEL AND CAST IRON MAIN. The project replaced 6" dianneter cast iron and bare steel lines with 8" high density plastic pipe, reflecting the	ed 6" diameter cast iron at	rd bare steel lines wit	h 8" high density p	lastic pipe, reflecting the	
needs of distribu	ution planning crite	ria. Re-routing was necess	sary due to conflicts wi	needs of distribution planning criteria. Re-routing was necessary due to conflicts with subterranean utilities (telephone) in Memorial Ave. and Windsor St. Additional, unexpected costs were incurred to	lephone) in Memorial Av-	e, and Windsor St. A	additional, unexpec-	ted costs were incurred to	~
place sand padd	ing around the new	r main in critical locations	and to construct offset:	place sand padding around the new main in critical locations and to construct offsets around facilities of competig utilities.	chg utilities.			AND PRINCIPLE OF THE PR	
21	2001	Chicopee / Chicopee	\$266,377	\$326,913	\$60,536	See Justification \$388,472	\$388,472	S01D1019	

Justification for Cost Variance—List No. 21: BARE STEEL AND CAST IRON MAIN. Coordinated with a major municipal project announced by Chicopee to install new water and sewer lines, this project was identified for work primarily on Chicopee Street and encompassed a second separate authorization with the same code for side-streets off Chicopee St. Costs incurred under both authorizations were combined in the cost record for S01 D1019.

\$508.862

22	2001	Lawrence/Broadway 8370.760	\$370.760	\$533,173	\$162,413	See Justification	\$592,454	L2001D0001	
ł		St.			•	•	8652,866		
Justification fo	r Cost Variance-	for Cost Variance - List No. 22: BARE STEEL AND CAST IRON MAIN. In conjunction withfull depth street reconstruction of Broadway St. (Route 28) announced by the City of	I. AND CAST IRON	MAIN. In conjunction with	rfull depth street reconstru	action of Broadway S	it. (Route 28) announ	ced by the City of	
Lawrence, the p	moject anticipated	Lawrence, the project anticipated replacement of 3000 feet of 6" cast iron main and 1000 feet of 12" bare steel main. Because the street reconstruction exposed and disturbed main locations in excess of	6" cast from main and	1000 feet of 12" bare steel	main. Because the street	reconstruction expos	ed and disturbed mai	n locations in excess of	
that anticipated.	project installation	that anticipated, project installation included 4212 feet of new plastic pipe (30% over estimate), mostly replacing aging cast iron.	v plastic pipe (30% ove	er estimate), mostly replacit	ng aging cast iron.				
23	2001	Foxboro / Baker St. \$90,205	\$90,205	\$107,993	\$17,788	Sec Justification \$117,558	\$117,558 \$176,076	B01D5038	
							0.000		
		VIDEO TO CO. C. T.	T ALA IN The western	JAIN The marked was actimated to replace over 2700 four of bare steel main. Town permitting unexpected by required saw culting and	vor 3700 fant of bare stool	main Town permit	ing unexpected to red	nired saw cutting and	

St. 2001

Cauton / High St. S95,938

St. 57.679

See Justification for Cost Variance List No. 25: BARE STEEL MAIN. In concert with municipal street reconstruction in High Street, the project was estimated to replace a deteriorating bare steel and increased trucking, disposal and clean fill costs.

St. 57.679

See Justification St. 5185,535

Justification for Cost Variance List No. 25: BARE STEEL MAIN. In concert with municipal street reconstruction in High Street, the project was estimated to replace a deteriorating bare steel and increased trucking, disposal and clean fill costs.

Scoordination with municipal authorities, and increased trucking, disposal and clean fill costs.

Scoordination Main increased trucking St. 5000 St. 500 and disposal, and required expenditure and transport of clean sand and gravel for use as backfill and compacting material. \$103,147 \$107,367 Marshfield / Ferry 2001 7

extra time and materials to reduce airbome particles and migration of byproducts caused by saw cutting. Unanticipated quantities of boulder and ledge impeded excavation, increased cost of removal

Filed on July 3, 2005 "REDLINED" Version DTE-3-21 REVISED

Col. 1 List No.	6,10							
ist No.	7.107	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
	Year	Location	Pre-Construction Estimated Cost - Mains ²	Actual Cost - Mains³	Amount the Estimate Varied from Actual Cost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate (%)	Totaf ⁴ Cost – Mains	Project ID
ustification for lorthampton. C	r Cost Variance— Ince exposed, the	Justification for Cost Variance—List No. 26: BARE STEEL MAIN. Project estimated at replacement of \$300 feet of bare steel main coordinated with full depth municipal street reconstruction by Northampton. Once exposed, the pipe condition warranted replacement of an additional 763 feet to tie in new pipe. Unexpectedly, Northampton required Bay State to foot cost of surface paving. Heavier than anticipated traffic volume required additional molice. Final main cost includes 12 un- or under-estimated tie ins on side streets (51% of the variance).	EL MAIN. Project est eplacement of an additional praint of an additional main cost	imated at replacement of 5, tional 763 feet to tie in new includes 12 un- or under-e	300 feet of bare steel mai or pipe. Unexpectedly, No stimated tie ins on side st	n coordinated with ful orthampton required B: rects (51% of the varia	I depth municipal stre ay State to foot cost o ance).	et reconstruction by of surface paving.
27	2000	W. Springfield / Riverdale St. (Rte 5)	846,259	\$112,477	\$66,218	See Justification	\$117,141 \$125,692	S00D1001
ustification for	r Cost Variance	Justification for Cost Variance - List No. 27: MAIN REPLACEMENT	LACEMENT/RELIAE	/RELIABILITY IMPROVEMENT. Riverdale St. at the construction area is busy Route 5, a four-lane state highway. The	Riverdale St. at the cons	struction area is busy F	Route 5, a four-lane st	ate highway. The
ontrolled densitinally, the new	Ilmate was based of the fill material and main was expected and the fill material and th	initial project estimate was based on engineering for street's edge, oil pavement constituences. The permit, nowever, required obcassions in inginer coast to pavement controlled density fill material and police details. The use of controlled density backfill material meant that no excavated soil could be reused in the trench, adding to removal and disposal rages. Finally, the two main was expected to cross Route 5 using an abandoned gas main a sleeve for plastic pipe insertion. Once exposed, it was determined by engineering that the abandoned line was example, the coasting but the abandoned line was	coge, ou pavement co controlled density bas nain abandoned gas main	Therefore construction. The perfull, nowever, required organization fallogistations resuming in ingice coast to partition ensity backfull material meant that no execavated soil could be reused in the trench, adding to removal and disposallarges. gas main a sleeve for plastic pipe insertion. Once exposed, it was determined by engineering that the abandoned line was comply construction (including horito perhalogor) and related cost	wever, required oreawnow of excavated soil could be sertion. Once exposed, it nebuding horing technological collections of the second of the s	reused in the trench, a was determined by en or)	aning in figure coasadding to removal and igineering that the abs	disposalarges.
28 28	2000	Andover / Phillips St.	\$127,676	\$120,992	(\$6,684)	-5%	\$130,025 \$145,426	L2000D0012
29	2000	Lawrence / Exeter St.	296,6018	\$106.187	(\$3,780)	-3%	\$110,397 \$111,650	L2000D0005
30	2000	Hanson / Brook St.	\$169,306	\$222,288	\$52,982	See Justification	\$236,773 \$248,674	B00D5029
ustification for stimated in this	r Cost Variance- s phase, 3870 feet anson's unplanned	Justification for Cost Variance—List No. 30: BARE STEEL MAIN/RELIABILITY IMPROVEMENT. This project was undertaken in three phases to improve gas pressure and delivery. As estimated in this phase, 3870 feet of 12" coated steel replaced an equivalent length of 8" bare steel main installed in 1952. Extra pavement cuts, asphalt removal and resurfacing costs were incurred to comply with Hanson's unplanned decision to widen the street. Additional police details were required to secure worker safety and control traffic.	EL MAIN/RELIABIL d an equivalent length t. Additional police d	of 8" bare steel main instal etails were required to secu	his project was undertaker lled in 1952. Extra paver are worker safety and con	n in three phases to im ment cuts, asphalt rem trol traffie.	prove gas pressure and oval and resurfacing	id delivery. As costs were incurred to
31	2000	Taunton / Floral St.	\$117,923	\$101,794	(\$16,129)	-14%	\$115,500 \$125,522	B00D5020
32	1999	Easthampton / Plain St.	\$61,190	\$132,280	871,090	See Justification	\$136,967 \$140,464	S99D1053
ustification for eterioration wa istalled under p	r Cost Variance- is greater than exp bavement, rather th	Justification for Cost Variance—List No. 32: BARE STEEL MAIN. The project was estimated for replacement of 4400 feet of deteriorating bare steel main, but once exposed, the extent of deterioration was greater than expected. In total, 5348 feet of new main was installed (22% more than estimated). Easthampton permitted the construction on the condition that the replacement main be installed under pavement, rather than beneath the concrete sidewalk, as previously estimated. In addition, Bay State had to compensate for the replacement of drainage pipes, the installation an asphalt	iel. MAIN. The proje if new main was install dewalk, as previously	The project was estimated for replacement of 4400 feet of deteriorating bare steel main, but once exposed, the extent of vas installed (22% more than estimated). Easthampton permitted the construction on the condition that the replacement exiously estimated. In addition, Bay State had to compensate for the replacement of drainage pipes, the installation an	ement of 4400 feet of detect). Easthampton permity y State had to compensate	eriorating bare steel m tted the construction o a for the replacement o	nain, but once exposed in the condition that the of drainage pipes, the	I, the extent of the replacement main be installation an asphalt
berm along 400	feet of the road's	berm along 400 feet of the road's edge and install a 400 foot asphalt patch.	asphalt patch.	101 1913	£30 186	See Instification	\$172.085	S99D1014
€	6661	Project		5 1 5 1 5 1 C	001500		\$179,528	
ustification for roject. After the nd complicated ompacting mate	r Cost Variance— he estimate, it was 1 by high groundw erial. To protect if	Justification for Cost Variance—List No. 33: MAINS REPLACMENT. This project was designed to work in cooperation with the continued 1998 Falls Project, a sate funded storm water separation project. After the estimate, it was determined that some main segments had to be installed at greater depths because of conflicts with other utilities' underground facilities, but that work was impeded and complicated by high groundwater levels. Groundwater had to be contained (to prevent trench collapse) by continuous pumping. Finally, the road sub-base was predominantly clay, an inappropriate compacting material. To protect its main, Bay State had to remove, dispose of, and refill the trench, protecting its main, with sand fill and processed gravel. Because of all these factors the construction pages showed required because had not really for traffic control and worker safety.	PLACMENT. This processing the contained (to had to be contained (to emove, dispose of, and worker safety.	This project was designed to work in cooperation with the continued 1998 Falls Project, a sate funded storm water separation to be installed at greater depths because of conflicts with other utilities' underground facilities, but that work was impeded med (to prevent trench collapse) by continuous pumping. Finally, the road sub-base was predominantly clay, an inappropring of, and refill the trench, protecting its main, with sand fill and processed gravel. Because of all these factors the construct of site.	c in cooperation with the ceause of conflicts with o y continuous pumping. F g its main, with sand fill a	continued 1998 Falls I ther utilities' undergro inally, the road sub-ba and processed gravel.	Project, a safe funded a ound facilities, but tha use was predominantly Because of all these I	storm water separation at twork was impeded as y clay, an inappropriect factors the construct of the construction of the const
34	060	South Hadley	\$98.845	1 \$180.372	581,527	See Justification	\$201,320	of 1101G66S

"REDLINED" Version DTE-3-21 REVISED Filed on July 3, 2005

		A A A A A A A A A A A A A A A A A A A	Non-	Non-Discretionary Plant Additions Account 367 (Mains) > \$100K ¹	Additions S100K ¹		WALL	
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
List No.	Year	Location	Pre-Construction Estimated	Actual Cost - Mains	Amount the Estimate Varied from Actual	Percentage of Actual Cost Over	Total ⁴ Cost - Mains	Project ID
			Cost - Mains²		Cost	or Under (-) in		
					(+/(-))	relation to		
						Estimate		
						(%)		
		Granby Rd.					\$226,643	
Justification fo	or Cost Variance-	Justification for Cost Variance - List No. 34: BARE STEEL	EL MAIN. The project	was estimated based on e	MAIN. The project was estimated based on expectation of replacing 3000 feet of bare steel main (circa 1925). South Hadley	000 feet of bare steel n	nain (circa 1925). So	uth Hadley
subsequently ec	anditioned its perm	it approval on the installar	tion of a sidewalk along	Granby Road (1500 feet)	underently conditioned its permit approval on the installation of a sidewalk along Granby Road (1500 feet). Additionally, when the main was exposed for time on neighboring streets Hilbrest Rd.	main was exposed for	r tims on neighboring	streets Hillcrest Rd.
and Malcolm A	ve, the bare steel it	1 those locations could no	at support the tie in becar	use of its own evidence of	and Malcolm Ave, the bare steel in those locations could not support the tie in because of its own evidence of deterioration. An additional, unexpected 400 feet of new main was installed and additional	nal, unexpected 400 fi	eet of new main was i	installed and additional
costs incurred to	o re-route and reso	costs incurred to re-route and resolve underground conflicts with other utilities (telephone, water).	; with other utilities (tele;	phone, water).				
35	1999	North Andover /	\$114,518	\$138,112	\$23,594	See Justification	\$152,179	L99D0074

2300 feet of 6" cast iron main (circa 1907). As construction commenced, it was clear that the replacement main conflicted with the Town's intended sewer construction, resulting in re-routing with an increased total of 2659 feet of 6" pipe being installed to eliminate the conflict. In addition, the project continued throughout the winter, incurring higher seasonal costs associated with winter Justification for Cost Variance - List No. 35: CAST IRON MAIN. Undertaken with a planned municipal sewer improvement project in North Andover, this project estimated the replacement of Mass. Ave. construction efforts.

36	1999	Lawrence / Thissel St.	\$54,781	\$145,875	\$91,094	Sec Justification	\$156,167	1.99150032
Justification for	r Cost Variance-	Justification for Cost Variance - List No. 36: SYSTEM DEL	ELIVERABILITY/RE	IVERABILITY/RELIABILITY. This system improvement project was engineered to improve gas from the Oak Street gate station.	nprovement project was	ingincered to improv	e gas from the Oak S	treet gate station.
Once construction	on commenced, it i	vas discovered that the ma	in in Oak St. (also kno	Once construction commenced, it was discovered that the main in Oak St. (also known as Route 110) was entrenched deeper than expected: to permit work in and around the main, a shoring box was	nehed deeper than expec-	ed: to permit work i	n and around the mai	n, a shoring box was
constructed to p	rotect against soil o	ave-ins. There was an inc	reased amount of exca	constructed to protect against soil cave-ins. There was an increased amount of excavated materal. Police details to control traffic and ensure worker safety exceeded estimates. Finally, mid-	s to control traffic and en	sure worker safety ex	seeded estimates. Fi	nally, mid
construction and	I unrelated to it, La	wrence suffered a sewer p.	ipe collapse beneath T.	construction and unrelated to it, Lawrence suffered a sewer pipe collapse beneath Thissel Street, which further delayed Bay State's ability to complete its construction.	delayed Bay State's abilit	y to complete its con	struction.	
37	1999	Attleboro / Pine St.	\$168,062	\$323,149	\$155,087	See Justification \$343,206	\$343,206	B99D5058

Justification for Cost Variance - List No. 37: BARE STEEL MAIN. The project planned to replace 8" bare steel (circa 1916) in downtown area of Attleboro. Initial contractor bids came in much higher than expected. Construction was further impeded by concealed and unmarked drains, none of which were revealed on City maps, that were struck by contracting equipment and then required welding repair on site. In addition, each offset required extra fittings. While construction crews were staged, welded repaired drains required x-ray confirmation before construction for main \$358,757 replacement could proceed

character services in the services in							A	× = 0 = 0 = 0	*
38	1999	Taunton / Dexter	\$296,081	\$273,558	(\$22,523)	-8%	\$299,252	B99D5056	
		Ave.					\$521,019		
3.0	1999	Walpole / Elm St. 8"	\$218,409	\$252,606	\$34.197	See Justification	\$272,868	B99D5040	
``	h h						\$286.919		_
		į	- WARRENCO POR				20 CT	<i>F</i>	,

See Justification for Cost Variance—List No. 39: BARE STEEL MAIN. In conjunction with Walpole's planned water main replacement on Elm St. (Route 27) and then street reconstruction, project testimated replacing over 5,200 feet of deteriorating bare steel main. Based on system design recommendations, an 8" coated steel main was installed to replace the existing bare steel main. A Walpole permit conditions required a payment to the town in lieu of paving, not anticipated in the project estimate. In addition, Walpole's unexpected permit conditions required that trench backfill be tested for a compaction at least twice within every 100 feet, trenches had to be paved after 95% compaction was achieved, and no trench was to be left unpaved at the end of each workday, meaning temporary and paving was required each night of active construction.

| See Justification | Strat.220 | Strat.220 |

Col. 2 Co	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
List No. Year Lot	ocation	Pre- Construction Estimated Cost - Mains ²	Actual Cost - Mains ³	Amount the Estimate Percentage of Varied from Actual Actual Cost Ove Cost (+/(-)) relation to Estimate	Percentage of Total Actual Cost Over Cost - Mains or Under (-) in relation to Estimate	Total⁴ Cost – Mains	Project ID

2886 feet of main was installed in W. Main St., in two sections. Earlier estimated costs anticipated some construction off pavement, but the Avon Water Department usurped, requiring the new gas main condition. Attempts at coordination with Avon municipal officials and expected road reconstruction caused the project to start and stop repeatedly, mobilizing and demobilizing the contractor crew deteriorating bare steel in the area. During construction, the amount of new 4" plastic pipe installed was increased by 40%, from 2060 feet to 2886 feet, in order to connect to existing main in good to be placed beneath the paved roadway entirely, in order to reserve the easier-access, unpaved location for the municipal water line.

Justification for Cost Variance - List No. 41: BARE STEEL MAIN. Estimated a conjunction with municipal full depth street reconstruction of Fall River Ave in Seckonk, state highway Route 6, to replace over 5200 feet of deteriorating bare steel with coated steel. The estimate underestimated the difficulty and expense of excavating the concrete street. Seekonk permit conditions required \$225,958 See Justification \$17,808\$181,207 8163,399 Seekonk / Fall River flowable fill, that added to fill and disposal costs.

than-expected pavement was present for over 1000 feet in South Main Street (Route 152); breaking pavement and disposal of spoils was higher than the estimate. Permitting unexpectedly eliminated the expectation of the initial estimate to site the main beneath sidewalk. Finally, permitting conditions unexpectedly prohibited abandoning 755 feet of wrought iron in place (as normally allowed). significantly deeper (at 8-12 feet) than anticipated. Increased depth of construction resulted in sheeting and shoring costs, higher excavation costs, additional spoil removal costs. In addition, thicker-Justification for Cost Variance - List No. 42: BARE STEEL AND WROUGHT IRON MAIN. Project to replace 4000 feet of bare steel and wrought from main (c. 1928) with 7000 feet of 12 cathodically-protected coated steel. Project included a railroad crossing, which required mains to be laid below it and the competing sewer and water utilities; therefore the required trench was 101,181,191 \$1,170,228 See Justification \$555,168 Additional costs were incurred for removal, sizing for transport and disposal of wrought iron main. \$428,000 Attleboro / Knight Ave. 12" 4

construction costs in light of concealed underground box culvert deep below Newman Ave. and Brook St. Additional costs were incurred to work around the culvert. In addition, the main was more Justification for Cost Variance—List No. 43: BARE STEEL MAIN. In conjunction with municipal full depth street reconstruction of Newman Avenue (Route 152), estimate did not include B99D5020 badly deteriorated than expected, requiring removal and replacement of increased footage (from 1880 feet to 2282 feet) in order to connect to existing main in good condition. \$135,068 \$144,560 See Justification \$44,988 \$126,146 \$81,158 Seekonk / Newman

399D5019

See Justification

\$300,980

\$559,583

Attachment RR₊DTE-154 requirements. More welding was required than estimated intially: the route presented a number of unanticipated below ground obstructions such as drain, sewer or water lines. In addition, he Town of Hanson undertook simultaneously to widen Brook St., resulting in extra pavement cuts, removal of spoils and unwanted fill, and increased resurfacing, unplanned paving for 1900 feet of road surface, Justification for Cost Variance - List No. 44: BARE STEEL MAIN/ SYSTEM RELIABILITY. 8" diameter bare steel main (c. 1952) replaced with coaled steel pipe meeting system design \$654.120 Hanson / Oldham St. | \$258,603

THE COLD DIST	3 101 102 Sharp	alle cole planning for 1900, square yales. I once safety octains o	מ מכור וכלמונים כניה מ	well before the state of the second walked and the second	a salety and another delates				٩
45	1999	Chicopee / Grattan	\$162,345	\$166,197	\$3.852	2%	\$190,055	S98D1041	hme
		St.					+1+'7+7¢		'n
46	1999	South Hadley / Falls	\$154,670	\$210,225	855,555	See Justification	\$232,347	0701086S	t H
		Project					\$247,095	ge	t R ge
			Lossonia	Action where reverse persons are the second and the				7	D.
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			Non- Ac	Von-Discretionary Plant Additions Account 367 (Mains) > \$100K ¹	of Additions > \$100K ¹				
Col. 1	Coll. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	
List No.	Ŷear	Location	Pre-Construction Estimated Cost - Mains ²	Actual Cost - Mains ³	Amount the Estimate Varied from Actual Cost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate	Total* Cost Mains	Project ID	

Justification for Cost Variance - List No. 46: MAINS REPLACMENT. This project was designed to work in cooperation with the continued 1998 Falls Project, a state funded storm water separation and complicated by high groundwater levels. Groundwater had to be contained (to prevent trench collapse) by continuous pumping. Finally, the road sub-base was predominantly clay, an inappropriate construction in 1999, construction crews uncovered an historic cistem. Construction was halted; and billable downtime occurred while South Hadley's Historic Commission inspected and documented compacing material. To protect its main, Bay State had to remove, dispose of clay spoils, and refill the trench, protecting its main with sand fill and processed gravel. Because of all these factors the project. After the estimate, it was determined that some main segments had to be installed at greater depths because of conflicts with other utilities' underground facilities, but that work was impeded construction pace slowed, requiring longer police details for traffic control and worker safety. Additionally, the project was estimated at 8850 feet, 9725 feet of main was installed. Lastly, during the artifact.

(instead of the 2300 feet of 6" and 5600 feet of 2" plastic as originally estimated). Finally, the highway construction lowered the road elevation and grade of Paquette St., leaving a Bay State main with Justification for Cost Variance—List No. 47: CAST IRON MAIN. Original estimate was based on project, planned in conjunction with municipal full depth street reconstruction of West St. (state highway Rte. 66), to replace more than 5200 feet of cast iron main (c. 1908 - 1927). Unanticipated delays occurred in the state highway project. In the middle of the multi-year project, and following reconstruction to provide an alternate feed into downtown Northampton in light of the bridge's expected demolition. In tola 4786 feet of 8" coated steel and 2709 feet of 2" plastic main were installed intermediate pressure main feed into Northampton center. Additionalengineering analysis demonstrated that it would be reasonable to install an 8" coated steel line in West St as part of this highway the initial authorization, Bay State was notified that a bridge over the Mill River, maintained for the purpose of utility crossings, was expected to be abandoned: on that bridge was Bay State's 8" \$369.187 Sec Justification See Justification \$49,392 insufficient cover. Bay State was required to lower the main at unexpected expense to conform to regulations. \$117,985 Northampton / West Chicopee / Granby 47

Justification for Cost Variance - List No. 48: BARE STEEL MAIN. Because the project was estimated to take place in conjunction with planned municipal full depth street reconstruction in Granby streets to replace deteriorating main discovered post-estimate added 1004 feet of 2" main. Offsetting higher cost was the reduced main cost on Granby St. proper, where only 10,000 feet of new main Rd., it was estimated without resurfacing costs, however, (Thicopee delayedits work, requiring Bay State to repave the surface for traffic and main safety. In addition, unexpected work on four side 8900Cl86 \$372,272 was required (11000 feet had been estimated).

\$282,512

\$233,120

Justification for Cost Variance - List No. 49; CAST IRON MAIN. Planned to coordinate with City of Lawrence repair on Ferry St., project to replace 1548 feet of deteriorating cast iron main (c. \$154,365 8115,166 \$118,755 \$154,013 See Justification See Justification 1905). After exposing the main, more pipe than expected was in poor condition. 1860 feet of deteriorated cast from main was ultimately replaced \$34,005 \$110,642 \$76,637 Lawrence / Ferry St. Methuen / Pleasant

Justification for Cost Variance List No. 50: CAST IRON MAIN. Project to replace a cast iron main that was in conflict with a municipal sewer project to relocate sewer and drain lines in Pleasant Street and surrounding area. Methuen extended its plan unexpectedly, changing the location for the new sewer line. This created additional conflict with undergroundacilities, requiring Bay State to move and replace more main than expected. Additional excavation and backfilling expenses were incurred. Initial estimate of 1784 feet increased to 3033 feet of newly installed replacement pipe.

\$279,602 \$338 0% \$204,410 \$305,932 \$154,614 \$12,036 8% \$165,894 \$174,413	Pembroke / Oldham \$280,000 \$279,602 \$338 U% \$450,474 U% \$450,932 U% \$142,578 \$154,614 \$12,036 \$8% \$8% \$812,636 \$174,413 \$198D5062	The state of the s	The state of the s					010000	4/05/1001	ı
St. \$305,932 Holbrook / South \$142,578 \$154,614 \$12,036 \$% \$165,894 1 Franklin St. \$174,413 \$174,413 \$174,413 \$174,413	St. \$305,932 Holbrook / South \$142,578 \$154,614 \$12.036 \$% \$165,894 B98D5062 Franklin St. \$174,413 \$174,413 \$174,413	1998	Pembroke / Oldham	\$280,000	\$279,662	5338	0%0	07-17-17-07-07-07-07-07-07-07-07-07-07-07-07-07	COUCUSYS	t Pa
Holbrook / South \$142,578 \$154,614 \$12.036 8% \$465,894 1 Franklin St.	Holbrook / South \$142,578 \$154,614 \$12.036 8% \$165,894 B98D5062 Franklin St. Franklin St. \$174,413 B98D5062	;	St.					\$305,932		RR age
Franklin St.	Franklin St.	1998	Holbrook / South	\$142,578	\$154,614	\$12,036	8%	\$165,894	B98D5062	-D 8
	The second secon)	Franklin St.					\$174,413		of

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
List No.	Year	Location	Pre- Construction Estimated Cost - Mains ²	Actual Cost - Mains ³	Amount the Estimate Varied from Actual Cost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate (%)	Total ⁴ Cost - Mains	Project ID
53	8661	Raynham / New Cape Highway	\$97,531	\$102,053	\$4,522	5%	\$104,006 \$105,751	B98D5059
54	8661	Brockton / Menlo St.	\$82,728	\$197,534	\$114,806	See Justification	\$212,835 \$230,125	B98D5056
ustification for stimute to instructing cost	or Cost Variance all 2886 feet of ne ts, but Brockton d	Justification for Cost Variance—List No. 54: CAST IRON MAIN. Project was required because of subsurface disturbance to cast iron main (c. 1903-1904) due to road reconstruction. Initial estimate to install 2886 feet of new main, but actually installed 4199 feet. During construction, a culvert was discovered that added additional work and expense. Initial estimates also expected mesurfacing costs, but Brockton did require a \$14.211 paving contribution on this job.	MAIN. Project was ed 4199 feet. During ec contribution on this jo	oject was required because of subsurface disturbance to cast iron main (c. 1903-1904) due to road reconstruction. Initial During construction, a culvert was discovered that added additional work and expense. Initial estimates also expected no on this job.	irface disturbance to cast i discovered that added add	ron main (c. 1903-190 litional work and expe	94) due to road recon: nse. Initial estimates	struction. Initial also expected no
55	8661	55 1998 Seekonk / Newman \$174.456 \$233,574 \$59,118 See Justification \$250,164 B98D5034 Ave. Ave.	\$174,456	\$233,574	\$59,118	See Justification	\$250,161 \$264,077	B98D5034
project was to r areas to accomi 56	project was to replace deteriorating bare steel wi areas to accommodate future drain construction. 56 Holbrook /	project was to replace deteriorating bare steel with a new. Post-estimate State permit required installation of temporary asphalt pavement. In addition, extra depth construction was required in some areas to accommodate future drain construction. See Justification \$280.470 B98D5032 B98D5	ost-estimate State permi	it required installation of te	temporary asphalt paveme	int. In addition, extra a	depth construction was \$280,470	as required in some B98D5032
ustification feel. However ecause of the	or Cost Variance 5, additional new n unexpected level	Justification for Cost Variance—List No. 56. BARE STEEL MAIN. Project estimate based on installing 2730 feet of main, in conjunction with street reconstruction, to replace deteriorating bare steel. However, additional new main was installed in Cottage St., Platts St., Summer St. and Winter St., totaling new main installation of 4758 feet (174% more new main than originally estimated). Because of the unexpected level of deterioration, more replacement was necessary, which caused Bay State's work to lag behind the completion of street reconstruction. Completion costs were incurred	EL MAIN. Projectestii e St., Platts St., Summe cement was necessary.	mate based on installing 2 rr St. and Winter St., totall which caused Bay State's	730 feet of main, in conjuing new main installation (work to lag behind the co	metion with street rece of 4758 feet (174% m empletion of street rece	\$299,914 mstruction, to replace one new main than or onstruction. Complet	deteriorating bare ginally estimated).
1	8661	Franklin / Lincoln & Main St.	\$401,895	\$377,489	(\$24,406)	%9-	\$420,298 \$445,246	B98D5023
58	1998	Taunton / Cooper Square	\$153,697	\$118,125	(\$35,572)	-23%	\$132,192 \$142,391	B98D5021
59	8661	Franklin / King St.	\$131,129	\$143,466	\$12,337	%6	\$160,550 \$173,537	B98D5012
09	1998	Brockton / Warren Ave.	\$144,073	\$262,762	\$118,691	Sec Justification	\$308,990 \$338,984	B98D5006
ustification for eet and east in erading. Find	or Cost Variance ron main. Origina ally the road surfa	Justification for Cost Variance—List No. 60: BARE STEEL AND CAST IRON MAIN. Combined with Brockton's planned reconstruction of Warren Ave., project was to replace deteriorating bare steel and cast iron main. Original estimate did not anticipate significant underground congestion of utility services, forcing constant rerouting. Nor did it expect side street tie ins at dra depth due to recording. Finally, the road surface was thicker than normal, supported by a concrete layer beneath the asphalt, increasing work to expose the old pipe and install new.	EL AND CAST IRON significant undergrour supported by a concre	MAIN, Combined with End congestion of utility seruce layer beneath the aspha	Brockton's planned recons rvices, forcing constant re alt, increasing work to exp	struction of Warren Av routing. Nor did it expose the old pipe and it	c., project was to rep pect side street tie ins istall new.	lace deteriorating bare at dxa depth due to
19	1997	Springfield / Boston Rd.	\$325,240	\$503,881	\$178,641	See Justification	\$601,644 \$681,816	901DL006
stiffcation for 5,044 feet. A ain and recon	or Cost Variance new regulator var iffguring the distri	Justification for Cost Variance—List No. 61: MAIN REPLACEMENT. In conjunction with state reconstruction of heavily traveled Boston Road, project installed 11,428 feet of main and retired 15,044 feet. A new regulator vault was added in the area during the project under a separate authorization. The project estimate included just the main run of pipe (excluding tie ins), but abandoning main and reconfiguring the distribution system for continued service required an unexpectedly high number of tie ins. Construction permitting required 7400 feet of pavement saw cutting (a more 6 more 6) and of page 15 more 6 more 6.	LACEMENT. In conjuring the project under a l service required an un	In conjunction with state reconstruction of heavily traveled Boston Road, project installed 11,428 feet of main and retired et under a separate authorization. The project estimate included just the main run of pipe (excluding tie ins), but abandonin lired an unexpectedly high number of tie ins. Construction permitting required 7400 feet of pavement saw cutting (a more declarated expected) have propositionally 10. down. Einally, an interpreted change in the grade of bart of Boston Road.	Justification for Cost Variance—List No. 61: MAIN REPLACEMENT. In conjunction with state reconstruction of heavily traveled Boston Road, project installed 11,428 feet of main and retiral 15,044 feet. A new regulator vault was added in the area during the project under a separate authorization. The project estimate included just the main run of pipe (excluding tie ins), but abandon main and reconfiguring the distribution system for continued service required an unexpectedly high number of tie ins. Construction permitting required 7400 feet of pavement saw cutting (a more more and expected chance in the grade of part of Boston Road	l Boston Road, project led just the main run o armitting required 7400 an unexpected chans	installed 11,428 feet pipe (excluding tie) feet of pavement sage in the grade of part	of main and retired ins), but abandoning BB W cutting (a more 60 BB of Boston Road 60 GB of Boston Road 60 GB

7	Col 2	Col 3	Col. 4	Col. 5 Col. 6	Col. 6	Cel. 7	Col. 8	Col. 9
C.04. 1					7		1.040.14	Designat ID
List No.	Year Vear	Location	Pre- Construction Estimated Cost - Mains?	Actual Cost - Mains ³	Amount the Estimate Varied from Actual Cost (+/(-))	retrechage of Actual Cost Over or Under (-) in relation to Estimate (%)	Cost – Mains	riolest in
62	1997	Easthampton / Main St.	\$160,720	\$207,746	\$47,026	See Justification	\$223,035 \$236,409	S97D1003
Justification fo	r Cost Variance-	Justification for Cost Variance - List No. 62 BARE STEEL.	EL, CAST IRON AND	CAST IRON AND WROUGHT IRON MAIN. Because of road reconstruction, over 8000 feet of east iron, wrought iron and bare steed	. Because of road recons	struction, over 8000 fa	cet of cast iron, wrong	ght iron and bare steel
mains were slate	ed for replacement.	After authorization and c	construction had comm	mains were slated for replacement. After authorization and construction had commenced, it was determined, based on the condition of the pipes, that an additional 2706 feet of new pipe should be	ased on the condition of	the pipes, that an add	litional 2706 feet of no	eion of the marion
mstalled in seve	en side streets. A n	mix of changes in the Tow	A street reconstruction	installed in seven side streets. A mix of changes in the Town street reconstruction plan and poor pipe condition it is side streets, required discovered invariant and expansion of the property of the proper	7 (csp. III sine su cets) red	quilled unexpected inc	\$130.473	S97D1001
က	1221	Holyoke St.	0107.00	0000 T	-		\$145,574	
Justification for Route 141 in Extended the route 141 in Extended to 1	rr Cost Variance— asthamptom: the roa	 List No. 63: CAST IRON ad base is 8 inch thick refit a details (Fastbampton and) 	N MAIN. State funded inforced concrete. In or surrounding towns, as	Justification for Cost Variance—List No. 63: CAST IRON MAIN. State funded road replacement project complemented replacement of cast from main in tropoke 21. Holyoke 24. Is state ingrived Route 141 in Easthampton: the road base is 8 inch thick reinforced concrete. In order to reach its pipe, the road was sawcut and spoils were trucked away. Much heavier than anticipated traffic along the router details (Fasthampton and surrounding towns, as well as State Troopers) for worker safety and traffic discipline along the state highway worksite.	complemented replacemental was saweut and spoils are worker safety and traffic	nt of east fron main in were trucked away. I a discipline along the	I notyoke St. Flotyoki Much heavier than ant state highway worksit	e St. is state inginway ticipated traffic along te.
64	1997	Lawrence/ Arlington St.	\$89,515	\$160,506	\$70,991	Sec Justification	\$179,680 \$184,125	L97D0040
Justification fo	r Cost Variance	List No. 64: CAST IRON	MAIN. Replacement	Justification for Cost Variance—List No. 64: CAST IRON MAIN. Replacement in response to municipal construction nearby. Overrun occurred because 8" diameter line in Arlington Street, at MAOD of 20th action opening to proper depth.	onstruction nearby. Over Unstalling 350 feet of ne	Tun occurred because w main at proper depi	: 8" diameter line in A th.	rlington Street, at
MACI OF 200	isig, within exposed	Masterna (Ooldens	T 61 10 270	6144 55K	275 277	Soc Justification	\$151.820	I 97D0012
ço	/661	Methilen / Oaktand Ave.	6/7/6/16	055,4416	ا اشرات شده	See Justification	\$157,642	1 00000
Justification fo	r Cost Variance-	List No. 65. MAIN REP	LACEMENT. Estimat	Justification for Cost Variance - List No. 65: MAIN REPLACEMENT. Estimated for main replacement to take place in conjunction with municipal street reconstruction of Route 28, the project	take place in conjunction	with nunicipal stree	streconstruction of Ro	oute 28, the project
authorization di	id not include nume	authorization did not include numerous short connections to crossing mains	crossing mains.					
99	1997	Lawrence / Broadway & Methuen	\$401,246	\$314,402	(\$86,844)	-22%	\$348,419 \$355,736	L97D0011
67	1997	Easton / Main St.	\$278,878	\$424,783	\$145,905	See Justification	\$460,980 \$480,853	B97D5086
Justification fo	r Cost Variance-	List No. 67: BARE STE	EL MAIN/ MAIN REF	Justification for Cost Variance - List No. 67: BARE STEEL MAIN/ MAIN REPLACEMENT/SYSTEM DELIVERABILITY. In conjunction with reconstruction of Main St. Easton, deteriorating	ELIVERABILITY. In co	mjunction with recon-	struction of Main St. 1	Easton, deteriorating
bare and coated	steet main was rep	hare and coated steel main was replaced with 8" lines to deliver more than one quarter mile of the project. The post-estimate statements	iver gas from Easton L.P. state highway permit i	hare and coated steet main was replaced with 8" lines to deliver gas from Easton LNG facility. Costs increased when it was discovered Main St. had a 7" layer of sophalt over a 7" layer of concrete for money than one construct mile of the project. The post-estimate state highway permit required saw cutting and spoils replaced with flowable fill. Permit also required temporary paving, which required	d when it was discovered oils replaced with flowab	Main St. had a 7" lay te fill. Permit also re-	yer of asphalt over a 7 quired temporary pavi	" layer of concrete for ing, which required
Bay State to re-	excavate 7" of tem	porary pavement and repla	ace it with permanent is	Bay State to re-excavate 7" of temporary pavement and replace it with permanent infrared treated patch. None of this was expected, as the activity of street reconstruction had initially been anticipated	e of this was expected, as	the activity of street i	reconstruction had init	tially been anticipated
to doverant with	paving and reneve	to dovetan with paving and reneve Isay State of that cost.		- Constitution of the Cons	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.			

S95D1002

\$193,588 \$219,261

See Justification

MADTE regulations required replacement of cast iron pipe exposed or endangered by nearby construction. Additional costs were incurred because ledge was unexpectedly encountered along East St. in the line of main and trench assigned to the replacement pipe. Excavation required specialized equipment and extra labor charges. Removed ledge had to be hauled away and disposed of and trench

backfilled with processed gravel. Longer police details were required for worker safety and traffic control along the site.

\$129,515

Springfield / Parker St.

1995

78

\$147,065

	Tomas a constant and		Non-Ac	Non-Discretionary Plant Additions Account 367 (Mains) > \$100K ¹	Additions \$100K ¹	***************************************		
Co. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
List No.	Year	uo	Pre- Construction Estimated Cost - Mains ²	Actual Cost - Mains ³	Amount the Estimate Varied from Actual Cost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate	Total ⁴ Cost – Mains	Project ID
70	9661	Taunton / Williams St.	\$154,937	\$126.388	(\$28.549)	-18%	\$131,005 \$139,624	B96D5060
7.1	1996	Hanover / Main St.	\$190,512	\$124,656	(\$65,856)	-35%	\$132,706 \$141,632	B96D5059
72	1996	Brockton / Sawtell Ave.	\$147,900	\$137,510	(\$10,390)	-7%	\$155,653 \$167,982	B96D5031
73	1996	Brockton / Belmont St.	\$313,429	\$348,531	\$35,102	See Justification	\$390,718 \$410,984	B96D5027
Justification fo	or Cost Variance-	Justification for Cost Variance - List No. 73: BARE STEEL street reconstruction on Belmont St., Route 123. Estimate did 1	EL AND CAST IRON d not include concrete.	AND CAST IRON MAIN. Project to replace over 8500 feet of deteriorating bare steel and east iron main in conjunction with municipal of include concrete street cutting and removal; city permits were conditioned to allow night work only.	over 8500 feet of deterior city permits were condition	ating bare steel and ca	ist iron main in conjui ork only.	nction with municipal
74	9661	Brockton / Main & Pleasant St	\$148,000	74 1996 Brockton / Main & \$148,000 \$220,587 \$72,587 See Justification \$254,56 Pleasant St See Justification \$250,221	\$72,587	See Justification	<u>\$251,568</u> \$292,217	B96D5009
Justification fo	Par Cost Variance	List No. 74: CAST IRON d portable lighting. In add	MAIN. Project to replittion, concrete, cobble.	Justification for Cost Variance List No. 74: CAST IRON MAIN. Project to replace 4382 feet of deteriorating cast from main completed at night as conditioned by post-estimate city permit. Night work increases labor costs, required portable lighting. In addition, concrete, cobblestones and railroad ties concealed under pavement had to be removed, sized and trucked for disposal at additional cost	tting cast fron main compl scealed under pavement h	cted at night as condi- ad to be removed, size	fioned by post-estima ed and trucked for dis	te city permit. Night posal at additional cost
75	1996	Avon / E. High St.	\$156,216	\$224,468	\$68,253	See Justification	\$249,350 \$256,722	B96D5004
Justification for that main could the new main pl	or Cost Variance— The faid off-street, a	Justification for Cost Variance—List No. 75: BARE STEEL MAIN. With street reconstruction that main could be faid off-street, avoiding street opening and resurfacing costs. Town unexpecting new main placed under pavement. Cost overruns were attributable to the change in location	EL MAIN. With street d resurfacing costs. To trributable to the change	Justification for Cost Variance—List No. 75: BARE STEEL MAIN. With street reconstruction, project to replace 3360 feet of bare steel main. The original estimate was prepared with expectation that main could be laid off-street, avoiding street opening and resurfacing costs. Town unexpectedly claimed off-pavement corridor for a proposed water main. The Town's permit was conditioned on the new main placed under pavement. Cost overruns were attributable to the change in location.	replace 3360 feet of bare solf-pavement corridor for	steel main. The origin a proposed water mai	ial estimate was prepa in. The Town's perm	red with expectation it was conditioned on
76	1995	Springfield / Belmont Ave.	\$186,160	\$284,840	\$98,680	See Justification	\$323,463 \$350,717	S95D102S
Justification fo	or Cost Variance— ipated was the higher I delays caused by c	Justification for Cost Variance—List No. 76: CAST IRON MAIN. Project 116). Unanticipated was the higher than expected cost of connecting mains to rerouting and delays caused by conflicts with other underground facilities.	MAIN. Project to reponnecting mains in side ground facilities.	Justification for Cost Variance—List No. 76. CAST IRON MAIN. Project to replace over 5200 feet of cast from main in conjunction with street reconstruction in Belmont Ave. (aka Route 83 and 116). Unanticipated was the higher than expected cost of connecting mains in side streets due to the higher than expected individual connections that were required. Additional costs were incurred due to rerouting and delays caused by conflicts with other underground facilities.	tiron main in conjunction an expected individual co	with street reconstructions that were re-	tion in Belmont Ave. equired. Additional c	(aka Route 83 and osts were incurred due
77	1995	Ludlow / East St.	\$135,070	\$212,468	\$77,398	See Justification	\$310,888 \$388,190	S95D1005
Justification fo	or Cost Variance	Justification for Cost Variance—List No. 77: CAST IRON MAIN. Project estimated on replacement of about 5200 feet of east from main in concert with a sewer separation construction project in Justines of the property of the	MAIN. Project estin	Justification for Cost Variance—List No. 77: CAST IRON MAIN. Project estimated on replacement of about 5200 feet of east from main in concert with a sewer separation construction project in Justin for Cost Variance—List No. 77: CAST IRON MAIN. Project estimated on replacing project in the inches an additional 855 feet of 6 inch pipe was installed.	out 5200 feet of cast iron	main in concert with a	a sewer separation con	nstruction project in prime was installed.

Col. 1 Col. 2 Col. 3 Col. 3 Col. 4 Col. 4 Col. 5 Col. 6 Col. 8 Col. 6				Non Ac	Non-Discretionary riant Auditions $Account\ 367\ (Mains) > \$100K^{1}$	Additions 			
List No. Year Location Prec. Court. Admin. Ariunal Ariunal Cots Over Cots Admin. Project ID	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
Participation for Cost Variance LAS No. 78 BARE STEEL AND CAST IRON MAIN. The project, designed to replace a mix of deteriorating burs steed and cast troup pipe in Parker Street in advance construction was estimated at 258 for the fair in stabled. If anamicipated side street tests (some extraver) were required to part the Parker St. main in service. There per section was estimated at 258 for the fair in real feet of the part of the	List No.	Year	Location	Pre- Construction Estimated Cost - Mains ²	Actual Cost - Mains	Amount the Estimate Varied from Actual (Ost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate (%)	Total ⁴ Cost – Mains	Project ID
1995 1995 Walpole / Main St. \$161,000 \$196,799 S144,739 S144,739 S140,484 B95D5060	Justification 1 advance of str Thirty percent	for Cost Variance eet reconstruction, more main was ins	List No. 78: BARE STE was estimated at 5280 feet stalled than estimated.	EL AND CAST IRON but in total 6848 feet w	MAIN. The project, desi- vere installed. 18 unanticit	gned to replace a mix of departed side street tidns (son	eteriorating bare steel ne extensive) were red	l and cast iron pipe in quired to put the Park	Parker Street in er St. main in service.
Assisting for Cost Variance—List No. 79 BARE STEE. THE Line conjunction with planned reconstruction of Main St. (Route IA), Walpule, project would epideme. The result in 1923. With plastic. Sate highly appearing training standards: a temporary 3" patch for the full length of teneth, alder 90 days the emporary patch and 4" of fill had to be removed and resplaced with an district control reasoners beyond those normally imposed. Finally, the crows exhanned human bones buried in the main route during construction; and was required. I wan permits added conservation and trained free permanent parts and the Nepture British general gener	97	1995	Walpole / Main St.	8161,060	\$305,799	\$144,739	Sec Justification	\$329,251 \$349,484	B95D5060
80 1995 Taunton / Hart St. \$123,630 \$113,533 \$15,544 B95D8048 81 1995 Taunton / Short St. \$163,650 \$143,168 \$20,482 \$1,3% \$145,444 B95D8048 82 1995 Holbrook / Quincy \$170,610 \$143,168 \$20,482 \$145,043 \$155,044 B95D8048 83 1995 Medway / Main St. \$170,610 \$143,168 \$22,713 \$8ee Justification \$177,209 \$171,799 B95D8048 83 1995 Relocation 16** \$134,350 \$154,350 \$154,430 \$124,622 \$147,04 \$177,209 \$177,209 \$177,209 \$177,000 83 1995 Relocation 16** \$173,436 \$154,431 \$22,713 \$8ee Justification \$176,000 \$176,000 84 1995 Relocation 16** \$170,000 \$124,431 \$22,713 \$8ee Justification \$176,003 \$170,000 85 1005 Brockton / MRTA \$170,000 \$176,000 \$176,000 \$176,000 \$176,000 <td>Justification 1 with plastic. S replaced with old. In additic</td> <td>for Cost Variance State highway perm a 4" base layer and an, since the project</td> <td>List No. 79: BARE STE nit required stringent surfac. I a second 3" finish layer; an t passed Cobb Pond and the uned human bones buried i</td> <td>ing standards: a tempo nd, for the permanent p e Neponset River, a we he permanent p e Neponset River, a we in the main route durins</td> <td>ith planned reconstruction yeary 3" patch for the full It asvement, the trench edge stlands permit was required</td> <td>of Main St. (Route 1A), Wength of trench; after 90 di had to be cut back, ground 1. Town permits added con te project for investigation,</td> <td>valpole, project woulk ays the temporary pat I and treated with infi: nservation and traffic , proper treatment and</td> <td>d replace 4" bare steel the and 4" of fill had to ared heat to bind the 1 control measures bey d removal.</td> <td>line, installed in 1927 o be removed and new pavement to the ond those normally</td>	Justification 1 with plastic. S replaced with old. In additic	for Cost Variance State highway perm a 4" base layer and an, since the project	List No. 79: BARE STE nit required stringent surfac. I a second 3" finish layer; an t passed Cobb Pond and the uned human bones buried i	ing standards: a tempo nd, for the permanent p e Neponset River, a we he permanent p e Neponset River, a we in the main route durins	ith planned reconstruction yeary 3" patch for the full It asvement, the trench edge stlands permit was required	of Main St. (Route 1A), Wength of trench; after 90 di had to be cut back, ground 1. Town permits added con te project for investigation,	valpole, project woulk ays the temporary pat I and treated with infi: nservation and traffic , proper treatment and	d replace 4" bare steel the and 4" of fill had to ared heat to bind the 1 control measures bey d removal.	line, installed in 1927 o be removed and new pavement to the ond those normally
81 1995 Taunton / Short St. \$153.65 \$144,544 B95D5048 82 1995 Habbrook / Quincy \$170,610 \$149,434 \$21,170 -12% \$183,034 B95D5043 82 1995 Heabrook / Quincy \$170,610 \$149,434 \$521,170 -12% \$185,950 B95D5043 83 1995 Medway / Main St. \$174,330 \$140,434 \$52,1713 \$182,950 B95D5044 84 1995 Brockton / MRTA S131,800 \$154,313 \$22,713 \$56,000 \$182,950 B95D5008 84 1995 Brockton / MRTA Relocation 16 \$131,800 \$154,513 \$52,713 \$56,000 \$182,523 \$185,500 Assilication for Cost Variance - List No. 84 MANN RELOCATION Aspart of an MBTA conversion of an existing freight line to a passenger line, a Bar State assement with a 12" line along the main was more costly than estimated because of himitations imposed by the MBTA, usually on weekends. The project also unexpectedly warranted a 2471 lagger to warn oncoming freight trains of hecanion of the construction site, for worker askey and saif train passenger. \$453,465 \$453,465 \$453,465 \$453,465	08	1995	Taunton / Hart St.	\$123,630	\$113,553	(\$10.077)	-8%	\$1 <u>25,6</u> 40 \$135,324	B95D5059
82 Holbrook / Quincy \$170,500 \$149,881,2 \$157,000 \$157,000 83 1995 Relocation (V. Main St. 1906) \$140,438 (\$21,862) -14% \$141,709 \$157,000 84 1995 Brockton / MBTA \$174,350 \$140,488 (\$24,862) -14% \$141,709 \$150,003 84 1995 Brockton / MBTA \$131,800 \$154,513 \$22,713 See Justification of Cost Variance—List No. 84. MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger line, a Bay State easement with a 12" line along the tracks became an issue, so the MBTA vevoked the easement. This line was a major feed into the Brockton distributions system. The previous line was abandoused in place and rapidly replaced by intendiating a passenger line, a Bay State easement with a 12" line along the was domeined in place and rapidly replaced by intendiating a passenger line, a Bay State assument and rapidly replaced by the MBTA. \$325,700 \$437,602 \$437,602 \$437,602 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$437,603 \$447,603 \$447,603 \$447,603 \$447,603 \$447,603 \$447,603 \$447,603 \$4	81	2661	Taunton / Short St.	\$163,650	\$143,168	(\$20,482)	-13%	\$146,546 \$153,034	B95D5048
83 1995 Medway / Main St. \$174,350 \$184,488 (\$24,862) 1-14% \$131,793 B95D\$008 84 1995 Brockton / MBTA \$131,800 \$154,513 \$22,713 See Justification \$185,950 B95D\$004 84 Brockton / MBTA \$131,800 \$154,513 \$22,713 See Justification \$185,950 B95C0004 94 Brockton / MBTA \$131,800 \$134,513 \$22,713 \$180,000 \$185,000 \$185,000 1005 Brockton / MBTA Revoked the casement. This line was amajor feed into the Brockton distribution system. The previous line was abandoned in place and rapidly replaced by including a new line in the street. Abandoning the main was more costly than extended because of limitations of the construction site, low works able of a new packed the casement. This line was amajor feed into the Brockton of the construction site, low works able of the massage to see Justification for Cost Variance - List No. 86. MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger trains; Bay State casement with a late to be removed during reconstruction. The main was run in Plain St. to coordinate with other work areas; required use of flaggers. The depth of the ins to existing lines around the easement were confined to MBTA requirements, meaning working on weekends, discontinuities between work areas; required use of flaggers. The depth of the ins to existing lines around the easement with a	82	1995	Holbrook / Quincy	\$170,610	\$149,434	(\$21,176)	-12%	\$ 158,812 \$167,909	B95D5043
841995Brockton / MBTA\$131,800\$154,513\$22,713See Justification for Cost Variance List No. 84: MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger line, a Bay State casement with a 12" line along the tracks became an issue, so the MBTA cancersion of an existing freight trains of the location of the construction sinposed by the MBTA. all work was abandoned in place and rapidly replaced by installing a new line in the street. Abandoning the main was more cestly than estimated because of luminations imposed by the MBTA. all work was done at times dictated by the MBTA, usually on weekends. The project also unexpectedly warranted a 24/7 flagger to warn oncoming freight trains of the location of the construction site, for worker safety and safe train passage.\$437,022\$435,608\$435,608\$435,000851995Brockton / Elliot St.\$625,000\$437,022\$185,492\$254,428\$56,1165\$67,000\$61,165861995Brockton / Elliot St.\$225,303\$255,0729\$255,426\$255,426\$61,165\$871,651\$871,651\$871,651861995Brockton / Elliot St.\$225,303\$255,0729\$255,426\$255,426\$61,000\$278,556\$871,651\$871,651861995Brockton / Elliot St.\$225,303\$255,0729\$255,426\$255,426\$61,000\$278,556\$871,651\$871,651861995Brockton / Elliot St.\$61,000\$1000\$1000\$1000\$1000\$1000\$1000\$1000871995Brockton / Intervale\$10000\$170,281\$10,281\$10,281\$10,281\$100	83	1995	Medway / Main St.		\$149,488	(\$24,862)	-14%	\$ 171,793 \$182,950	B95D5008
Justification for Cost Variance – List No. 84: MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger line, a Bay State casement with a 12" line along the tracks became an issue, so the MBTA revoked the casement. This line was a major feed into the Brockton distribution system. The previous line was abandoned in place and rapidly replaced by installing a new line in the street. Abandoning the main was more costly than estimated because of limitations imposed by the MBTA: all work was denoted in place and rapidly replaced by the MBTA: all work was denoted at lines dictated by the MBTA, usually on weekends. The project also unexpectedly warranted a 24/7 flagger to warn oncouning freight trains of the location of the construction site, for worker safety and safe train passage. 85.433.665 B95C0003 B95C0003 86 Brockton / Bilot St. \$225,303 \$255,426 \$257,426 \$267,1,651 B95C0002 86 Bridge Justification for Cost Variance – List No. 86: MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger trains. Bay State casement. A bridge over the Conral tracks became an issue, so the MBTA revoked the casement. A bridge over the Conral tracks became an issue, so the MBTA requirements, meaning worker safely. State casement with a 12" line along the assement. A bridge over the Conral tracks became an issue of the passenger trains. Bay State casement with a 18 was confined to MBTA requirements, meaning worker safely. State casement with a 18 weeken work areas; required use of flaggers. The depth of the ins to existing fines around the casement with a 18 was confined to MBTA sequirements, meaning workers affect. State casement w	84	1995	Brockton / MBTA Relocation 16"	\$131,800	\$154,513	\$22,713	See Justification	\$ 159,523 \$169,933	B95C0004
Second Cost Variance List No. 86 MAIN RELOCATION. As part of an MBTA conversion of an existing frequency arising seconstruction. The main was run in Plain St. to coordinate wire during construction of shoring for worker safety. Second Cost Variance List No. 86 MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger trains. Bay State casement with a 12" line along the tracks became an issue, so the MBTA requirements, meaning working on weekends, discontinuities between work areas, required use of flaggers. The depth of tie ins to existing lines around the easement were of extraordinarily deep, requiring construction of shoring for worker safety. Bridge S25,426 See Justification S470,000 S170,281 S10,281 S10,281 S183,476 S183,	Justification 1 tracks became installing a ner	for Cost Variance: an issue, so the M. w line in the street.	BT revoked the casement Abandoning the main was proceed to a same was proceed to a same of a same and a same and a same and a same and a same	LOCATION. As part of this line was a major s more costly than estire the warm one on the state of the state o	of an MBTA conversion of a feed into the Brockton di nated because of limitation in of freight trains of the foc	fan existing freight line to istribution system. The pre is imposed by the MBTA:	a passenger line, a Baryious line was abanda all work was done all work was done all	ay State casement with oned in place and rapid times dictated by the and safe train passage	n a 12" line along the dly replaced by MBTA, usually on e.
86 Bridge Justification for Cost Variance—List No. 86. MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger line, a Bay State casement with a 12" line along the tracks became an issue, so the MBTA revoked the casement. A bridge over the Conrail tracks was being rebuilt to allow passage of the passenger trains; Bay State had a main crossing over the bridge that had to be removed during reconstruction. The main was run in Plain St. to coordinate with other work caused by MBTA's extinguishment of the casement. As with List No. 84, much of this well-stransfer trains; Bay State had a main crossing over the bridge was confined to MBTA requirements, meaning working on weekends, discontinuities between work areas, required use of flaggers. The depth of tie ins to existing lines around the casement were of extraordinarily deep, requiring construction of shoring for worker safety. 87 1995 Brockton / Intervale \$160,000 \$170,281 \$10,281 \$6.60 \$183,476 \$183,476 \$10,000 \$1,000	85	1995	Brockton / Elliot St.	\$625,000	\$437,022 \$439,508	(\$187,978)	-30%	\$453,665 \$471,651	B95C0003
Justification for Cost Variance—List No. 86: MAIN RELOCATION. As part of an MBTA conversion of an existing freight line to a passenger line, a Bay State easement with a 12" line along the tracks became an issue, so the MBTA revoked the easement. A bridge over the Conrail tracks was being rebuilt to allow passage of the passenger trains; Bay State had a main crossing over the bridge that had to be removed during reconstruction. The main was run in Plain St. to coordinate with other work caused by MBTA's extinguishment of the easement. As with List No. 84, much of this well was confined to MBTA requirements, meaning working on weekends, discontinuities between work areas; required use of flaggers. The depth of tie ins to existing lines around the easement were of extraordinarily deep, requiring construction of shoring for worker safety. 1995 1995	98	1995	Brockton / MBTA	\$225,303	\$250,729	\$25,426	See Justification	\$267,168 \$278,556	B95C0002
extraordinarily deep, requiring construction of shoring for worker safety. 87 1995 Brockton / Intervale \$160,000 \$170,281 \$10,281 \$6% \$183,476 \$185,0001 \$4	Justification tracks became that had to be	for Cost Variance : an issue, so the M. removed during re	E. List No. 86: MAIN REI BTA revoked the easement construction. The main wa	LOCATION. As part of t. A bridge over the Cc is run in Plain St. to coc	of an MBTA conversion of ornail tracks was being reb ordinate with other work cr	f an existing freight line to utilit to allow passage of the austed by MBTA's extingutional use of flameter.	a passenger line, a Ba e passenger trains, Ba iishment of the casem	ay State casement will by State had a main cre nent. As with List No. existing lines around 1	na 12" line along the assing over the bridge 84, much of this well he easement were 0
87 1995 Brockton / Intervale \$160,000 \$170,281 \$10.281 \$6% \$183,476 B95C0001 \$4	extraordinarily	to Mis i A requiren y deep, requiring co	nerits, incarting working out onstruction of shoring for w	weekends, disconding vorker safety.	HES DELIVEDED WATER ALCAS, IN			C.	12
	87	1995	Brockton / Intervale	\$160,000	\$170,281	\$10,281	9/89	\$183,476	B95C0001

1-00	(ol. 2	Col. 3	Non- Ac Col. 4	Account 367 (Mains) > \$100K ¹ Col. 5 Col. 6	\$100K ¹ Col. 6	Col. 7	Col. 8	(ol. 9	
List No.	Year	Location	Pre- Construction Estimated	Actual Cost - Mains	Amount the Estimate Varied from Actual	Percentage of Actual Cost Over	Total [‡] Cost Mains	Project ID	····
			STIPIAL LIST		((-)/+)	relation to Estimate (%)			
	· · · · · · · · · · · · · · · · · · ·	St.			AAA ATT TILL TO THE TILL TO TH		\$189,320		
88	1994	Springfield / St. James Ave.	\$122,410	5178,695	556,285	See Justification	\$220,638	St. James Ave.	
Justification for	or Cost Variance- streets and the cons	- List No. 88: CAST IROR struction crew repeatedly e.	N MAIN. City of Spring encountered conflicts wi	Justification for Cost Variance—List No. 88: CAST IRON MAIN. City of Springfield planned street reconstruction prompted 2700 foot cast iron main replacement. The new main route ran through congested eity streets and the construction crew repeatedly encountered conflicts with existing underground facilities, requiring changes in the planned route. The changes resulted in a significant	struction prompted 2700 f	foot cast iron main rej s in the planned route	placement. The new in The changes resulte	main route ran through id in a significant	
amount of work	k to be moved unde	amount of work to be moved under a concrete sidewalk that itself first had to be removed, then later repaired	titself first had to be ren	moved, then later repaired.		· Allahaman			
68	1994	Randolph / North Main	\$190,400	\$12 9,927 \$97,257	(\$60,473) (\$93,143)	-32% -49%	\$107,520	No. Main	
06	1994	Lawrence / Brookfield St.	\$288,075	\$130,775	(\$157,300)	-55%	\$147,960	Brookfield St.	
Justification fo	or Cost Variance-	- List No. 90: SYSTEM D	DELIVERABILITY. W	Justification for Cost Variance—List No. 90: SYSTEM DELIVERABILITY. With the state's demolition of the White Pumps Bridge over the Merrimac River, this project abandoned the line on the	f the White Pumps Bridge	e over the Merrimae I	River, this project ab:	andoned the line on the	
bridge and com problems assoc	bridge and constructed a new line to bypass the bridges. problems associated with exposed pipe on bridges.	bridge and constructed a new line to bypass the bridge. In doing problems associated with exposed pipe on bridges.	foing so and installing n	so and installing new 12" main in various South Lawrence streets, Bay State improved distribution system pressures and climinated	uth Lawrence streets, Bay	y State improved distr	ribution system pressu	ires and climinated	
16	1994	Lawrence / Andover	\$256,103	\$259,691	\$3,588	1%	\$296,852	L94D0003	_

Justification for Cost Variance—List No. 92: BARE STEEL MAIN. The project was the second phase of construction to replace deteriorating bare steel under Route 140 in Wrentham. Preconstruction estimate and authorization were based on a routing that assumed off-pavement construction. The Mass Highway permit was conditioned on the main being installed in the roadway, under pavement and specified that the street would be saw cut, and all trenches would be backfilled with flowable fill. Excavated soil and street spoils were hauled for disposal. State also required Bay State to re-excavate 7" of temporary pavement and replace it with permanent patch, infrared treated, all at unanticipated extra cost. 13941)5023 See Justification | \$125,689

B94D5052

\$321,295 \$618,100 \$634,041

See Justification

\$197,152 \$3,588

Lawrence / Andover Street Wrentham / East St.

1994 1994

6

93	1994	Franklin / East Central St.	\$65,130	\$113,094	\$47,904	See Justification 8133,590	D24123042	
Justification fo	r Cost Variance-	- List No. 93 BARE STEL	J. MAIN. Coordinated	I with planned municipal s	street construction in East (Justification for Cost Variance - List No. 93: BARF STEEL MAIN. Coordinated with planned municipal street construction in ast Central St., downtown Franklin, project was to address	was to address	
deteriorating ba	rre steel main. The	: initial estimate anticipated	ledge and boulder rem	oval along the route. How	vever, extra police details	deteriorating bare steel main. The initial estimate anticipated ledge and boulder removal along the route. However, extra police details in the Town center were necessary to ensure worker safety, public	nsure worker safety, public	
passing and traf	ffic control. Becau	use the project estimate assu	umed street reconstructs	ion, estimates only include	ed an expectation of a tren	passing and traffic control. Because the project estimate assumed street reconstruction, estimates only included an expectation of a trench topping of 2" temporary pavement. However, street	However, street	ı
reconstruction v	was delayed, backfi	III with Bowable fill was rea	quired, and excavated s	soil had to be removed and	disposed of. Permanent	1	\tt	Ва
94	1994	Wrentham / East	\$104,750	\$146,018	\$41,268	See Justification \$155,143	B94D5020	y S
		Street			Annual Management of the Confession of the Confe	\$159,002	ım	ita
ustification fo	or Cost Variance-	- List No. 94; BARE STEE	El MAIN. Project to re	splace deteriorating bare st	teel nder Route 140 in Wre	Justification for Cost Variance - List No. 94. BARE STEEL MAIN. Project to replace deteriorating bare star Index Route 140 in Wrentham. Estimate included assumed routing and construction in	uling and construction in a	e (
he shoulder of	the road (off paver	the shoulder of the road (off pavement). State highway permit specified i	nt specified inFoadway o	construction, saw cutting o	of the street, and use of flo	inroadway construction, saw cutting of the street, and use of flowable till in all trenches. Excavated trench soil and street spo	ench son and street spots	Ga D
vere removed f.	or disposal. Permit	were removed for disposal. Permit also required re-excavation of 7" of temporary pavement in favor of a permanent, infrared treated patem.	in of 7" of temporary pa	ivement in favor of a perm	ranent, infrared treated pa-		R _t	s (
5	1994	Canton / Pleasant St. \$262.323	\$262,323	\$206,997	(\$55,326)	~ ~	1894D5008 Ed	Co .E.
ı						\$231,394	of i	mp 0
				010000000000000000000000000000000000000			15 14	ar 5-2
							64	1y 27

		Na Arranda Printer de la Carta	Lan Non-	Non-Discretionary Plant Additions	Aditions	AND AND AND ADDRESS OF THE ADDRESS O		
			Acc	Account 367 (Mains) > \$100K ¹	\$100K ¹			
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
List No.	Year	Location	Pre-Construction Estimated Cost - Mains ²	Actual Cost - Mains	Amount the Estimate Varied from Actual Cost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate (%)	Total ⁴ Cost – Mains	Project ID
96	1994	Brockton / Copeland St.	\$316,955	\$284,382	(\$32,573)	-10%	\$301,814 \$312,342	B94D5005
79	1994	Brockton/ Commercial Yard	8600,000	\$427,767	(\$172,233)	-29%	\$545,453 \$452,471	B94C0003
86	1994	Seekonk / Arcade Ave.	\$137,750	\$146,345	\$8,595	0%9	\$155,543 \$161,213	B94C0002
66	1994	Brockton & Avon/ MBTA Relocation 12"	\$769,765	\$1,010,446	\$240,681	See Justification	\$1,065,3 14 \$1,094,686	B94C0001
Justification for tracks became a Meadow Lane a Almost 10,500 I stringent, includ Water Departme	r Cost Variance— n issue, so the MB- and new 12" main in teet of main were in fing mandating use	Justification for Cost Variance—List No. 99: MAIN REPLACT tracks became an issue, so the MBTA revoked the easement, whi Meadow Lane and new 12" main in north Brockton and Avon. E Almost 10,500 feet of main were installed in North Montello St., stringent, including mandating use of flowable fill and excavation Water Department claimed the shoulder, requiring Bay State's co	ACEMENT. As part of which supported a major. n. Because of time con. St., Brockton, and Mer. ation and disposal of sc.'s competing main to be.	Justification for Cost Variance—List No. 99: MAIN REPLACEMENT. As part of an MBTA conversion of an existing freight line to a passenger line, a Bay State casement with a 12" line along the tracks became an issue, so the MBTA revoked the easement, which supported a najor feed into the Brockton district distribution system. Replacement included instation of a new 16" main near Meadow Lane and new 12" main in north Brockton and Avon. Because of time constraints involved, and limitations put on construction conditions, contractor bids came in higher than anticipated. Almost 10,500 feet of main were installed in North Montello St., Brockton, and Memorial Dr. and East Main St., Avon (each is a state highway, Route 28). Permit conditions for work in Route 28 were stringent, including mandating use of flowable fill and excavation and disposal of soils and street spoils. Initial estimates and engineering design anticipated shoulder or berm construction, but Avon's Water Department claimed the shoulder, requiring Bay State's competing main to be placed in the street. This increased resurfacing costs and police detail charges.	an existing freight line to istrict distribution system ations put on construction Avon (each is a state hi estimates and engineerin increased resurfacing cost	a passenger line, a Ba Replacement includ n conditions, contract ghway, Route 28). P ng design anticipated is and police detail ch	ay State casement with ded instantion of a new tor bids came in higher ermit conditions for v shoulder or berm compares.	h a 12" line along the v 16" main near r than anticipated. work in Route 28 were struction, but Avon's
. 001	1993	Chicopee / Memorial Ave.	\$206,000	\$268,971	\$62,971	See Justification	\$325.039	Memorial Ave.
Justification fo	r Cost Variance-	Justification for Cost Variance—List No. 100: BARE STEEL mayement construction, but the permit issued required installation	EL MAIN. Poor condution in the breakdown	Justification for Cost Variance—List No. 100: BARE STEEL MAIN. Poor condition 8" diameter bare steel main in Memorial Dr., Chicopee, was replaced. The project was estimated based on off-mayement construction, but the permit issued required installation in the breakdown lane of Route 33. Increased charges to break pavement, to hauf away street spoils and to repave over trench resulted	main in Memorial Dr., Cl d charges to break pavem	hicopee, was replaced tent, to hauf away stre	 d. The project was est eet spoils and to repay 	timated based on off- e over trench resulted.
101	1993	Seekonk / Taunton Ave.	\$121,395	\$129,381	\$7,986	7%	\$136,974	Taunton Ave.
102	1993	Brockton / N. Cary	\$148,475	\$134,512	(\$13,963)	-9%	\$153,802	No. Cary
103	1993	Andover / Holt Rd.	\$103,429	\$102,481	(8948)	-1%	\$105,654	Holt Road
104	1993	Brockton / Dover St.	\$125,745	\$100,062	(\$25,683)	-20%	\$110,645	Dover Street
105	1992	Brockton / Torrey St.	\$186,890	\$184,405	(\$2,485)	2	\$221,184	Torrey St.
106	1992	Marshfield / Ocean St.	\$159,000	\$168,073 \$165,734	\$9,073 \$6,734	69% -4%	\$188,344	
107	1992	Hanson / Maquan	\$349,600	\$115,401	(\$234,199)	-67%	\$137,954	Maquan St.
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COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO RECORD REQUESTS FROM THE D.T.E. D.T.E. 05-27

Date: August 19, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

RR-DTE-159: Quantify the percentage of base distribution costs collected on a dollar-for-dollar recovery.

Response: Attachment RR-DTE-159 below presents the costs collected dollar for dollar, inclusive

of the proposed recovery of the Pension/PBOP costs, as a percentage of total revenue as presented during cross examination. It also presents the base distribution costs

collected dollar for dollar as a percentage of base distribution costs.

Bay State Gas Company

Ln.			
<u>No.</u>	<u>ltem</u>	Amount	Reference
1	Costs collected dollar for dollar as	(\$)	
2	a percentage of total revenue		
_	a personage of total revenue		
3	Revenue:		
4	Operating Revenue	504,147,579	Sch. JES-1, Col. 5, Ln.1
5	Indirect GAF & DAF	26,092,473	Sch. JES-4, Col. 3, Ln.18
6	Total Revenue	530,240,052	
7	Dollar for Dollar Recovery:		
8	Gas costs	307,478,651	Sch. JES-1, Col. 5, Ln. 2
9	Indirect GAF & DAF	26,092,473	Sch. JES-4, Col. 3, Ln. 18
10	Pension & PBOP Costs	5,630,282	Exh. BSG/JES-4, Col. 2, Ln. 25
11	Total	339,201,406	
10	Costs collected dollar for dollar as		
		63.97%	
13	a percentage of total revenue	63.97 %	
	Distribution costs collected dollar for dollar	as	
15	as percentage of base distribution costs		
17	Pension & PBOP Costs	5,630,282	Exh. BSG/JES-4, Col. 2, Ln. 25
18	Bad Debt collected via CGA	7,118,165	Sch. JES-4, Col 2, Ln. 25
19	Indirect gas costs other than bad debts	7,731,478	AG-22-44, Att. 3, Pg. 1, Lns. 12, 14 & 16
20	Total distribution costs collected dollar		
	for dollar	20,479,925	
0.4	Total and of any las	504.447.570	0.1. 150.4.0.1.5.14
21	Total cost of service Less Cost of Gas	504,147,579	Sch. JES 1, Col. 5, Ln. 1
		307,478,651	Sch. JES-1, Col. 5, Ln. 2
23	Base distribution costs	196,668,928	
24	Distribution costs collected dollar for dollar as		
25	as percentage of base distribution cost	10.41%	